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ACCOUNTING FOR MODERN CORPORATIONS

INSTRUCTION PAPER

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ACCOUNTING FOR MODERN CORPORATIONS

INTRODUCTION

The history of business development during the last few years shows an unmistakable tendency toward the formation of large combinations of capital. That such combinations are destined to exert a controlling influence on our future industrial progress, seems to be a settled fact.

Where once small manufacturers, operating independently, produced goods in sufficient quantities to supply the trade in a limited territory, the tendency of the more modern plan is to concentrate production in large plants located with reference to sources of supply and the market for the finished product. The object of this centralized control of manufacturing industries is, primarily, economy of production, coupled with a desire to maintain greater stability in the general condition of a given industry.

Centralized control attains these objects in several ways. Economy of production results from a more even distribution of manufacturing orders among the several plants, insuring a more nearly uniform rate of production, and the placing of orders with those plants best equipped to handle a particular class of work. One plant may be equipped to perform certain operations in the process of manufacture at less cost than any other in the group. By a judicious distribution of orders each plant can be kept running full time on work that can be produced most cheaply. The cost of marketing the product is reduced by a distribution of orders with reference to the location of the plants, resulting in lower transportation charges. Stability of prices is maintained by a regulation of production at a point that will meet all demands but prevent over production. Selling costs are lessened because one salesman can cover a given territory for the entire group.

Several plans of organization intended to bring about these conditions have been tried. The most practical of these plans, and the one that seems destined to become the accepted plan, is the holding

company. Without combining all plants under the absolute ownership of one corporation, the holding company plan insures centralized control through the ownership by the parent company of a majority of the stock of the subsidiary company; amounting to a practical ownership of the companies themselves.

The formation of these combinations of capital has brought with it new problems in corporation accounting. Since accounting of this class is destined to increase in importance, a knowledge of the special problems involved and how to solve them has become a very necessary part of the knowledge of the accountant. And likewise a knowledge of the accounting problems of these enterprises is of the utmost importance to the investor, that he may intelligently analyze their financial statements and determine the real value of their stocks and securities.

Experience in solving these problems is by no means common, even among public accountants. Realizing the importance of the subject, and the danger of its being treated in a superficial manner if intrusted to an accountant lacking in practical experience, it was decided to secure the opinions of some of the best-known men in the profession, who are experienced in this very class of accounting.

The views of three men whose right to be considered authorities on this subject is unquestioned are presented herein. Mr. Lybrand presents a valuable paper on the subject, "The Accounts of Holding Companies;" Mr. Macpherson writes on "Corporation Accounting and Investigations," illustrated with a worked-out problem; Mr. Dickinson presents a paper entitled "The Profits of a Corporation," and in his treatment of accounting problems includes an illustrative example.

These papers are submitted as the expressions of men who are specialists, and with full confidence in their value to every student of business and accountancy.

THE ACCOUNTS OF HOLDING COMPANIES

1. While it may be true that many of the industrial enterprises now in existence remain as partnerships or as independent corporations, a very large number of undertakings of that character have been consolidated into that form of organization represented by the holding companies. It is with accounts of the latter class of industrial enterprises, therefore, that this paper will deal principally, because accounting principles, if sound, do not change with their application to any particular form of accounts, while accounting methods, if good, when modified to conform to the requirements of the different kinds of business operations, are applicable to small as well as to large undertakings.

POOLS

2. In the revival of industry which succeeded the industrial depression of 1873, the corporate form of organization began to be used more and more. The holding company had not then made its appearance and the great combinations of the present day did not then exist. In the meantime the corporations, not having consolidated, and therefore being competitors, were led to adopt various devices designed to eliminate the evils of competition from which they suffered. The formation of pools was one of the commonest and most popular methods employed. The pools were associations of manufacturers who agreed to place the marketing of their product under some central association, hoping thereby to secure the benefits of stable prices and a regulated output. The inherent weakness of the pools was that their provisions were not enforceable at common law, and good faith on the part of the members could be compelled only by the forfeiture of deposits, the imposition of fines and expedients of a similar character. Mutual distrust was apt to exist, withdrawal of members was possible, and in times of depression, when business at profitable prices was hard to obtain, and when the pool was most needed, it was usually most difficult to control the members or to keep them together.

TRUSTS

3. The failure of the pools to accomplish the object for which they were organized, led to the creation of a form of organization which was intended to have a legal foundation and a permanent existence, namely, the Trust. Under the trust form, the capital stocks of the constituent companies were assigned to a board of trustees, who issued trust certificates in lieu of the shares so assigned. The trustees, having been vested with the control of the corporations through the assignment of their capital stocks, became responsible for the management of the several companies and were thus in a position to adopt a settled policy in all matters pertaining to the limitation of output and the upholding of prices. The trust, as an expedient for lessening or obviating the evil of competition, and for securing the benefits of consolidation, was by reason of its authority, stability and permanent organization a decided advance over the temporary and ineffective pool. Its legal position was, however, found to be open to attack, and adverse judicial decisions in cases brought to test whether or not it was a combination in restraint of trade, finally drove the trust out of existence as a legal means of effecting combinations.

HOLDING COMPANIES

4. About the time the test cases to prove whether or not the trust was to be allowed to exist were in progress, a new legal expedient for accomplishing combination was provided through the enactment by the State of New Jersey of a revised General Corporation Act, under which the right was granted to one corporation to purchase and hold stocks of another, a right which prior to that time seems to have been held by the corporations only by virtue of their being organized under special laws. It has been said that, "for momentous consequences, this statute of New Jersey is hardly equaled in the annals of legislation; corporate organization could henceforth be promoted, not to serve the ends of industrial management, but solely in order that financial combinations might indirectly control operating companies through ownership of their capital stock." Thus the holding company originated, and under this law one consolidation followed another, until at the present time there exist the gigantic in-

dustrial combinations which virtually control the several lines of industry in which they are engaged.

ADVANTAGES OF COMBINATION

5. The principal factor leading to the formation of the industrial combinations was doubtless the desire to eliminate ruinous competition by obtaining so large a control over any one class of merchandise that it was possible virtually to regulate the price at which it could be sold. Contrary to the accepted idea, the control of prices does not necessarily mean their exorbitant advancement, but under enlightened management, exemplified, we believe, in one of the largest combinations, it enforces a policy of stability in prices, under which business in times of depression suffers vastly less than if indiscriminate price cutting were in effect. However, other causes than the control of prices were instrumental in hastening the formation of combinations. In a territory as extensive as the United States, the transportation of raw materials to the seat of manufacture, and the finished product thence to the place of its disposal, constitutes a large element of cost. Under a combination, the orders may be so distributed that the mills most advantageously situated as respects transportation facilities can be worked to their full capacity, while others less favorably located may, except in times of unusual activity, be closed temporarily. Orders for certain classes of merchandise may be concentrated in one plant so that it may run continuously with few changes of appliances, and thus turn out the largest output at a minimum of cost. Sources of raw materials may be controlled through the large financial resources of the combination, or by the amalgamation with it of the companies controlling such raw materials. Labor may be dealt with in larger groups and more advantageously; expenses of distribution of goods may be curtailed by dispensing with salesmen who traverse each others' territory; duplicate offices may be eliminated; stocks of merchandise may be reduced; management and office expenses may be decreased by concentration—these are some of the other advantages which it was believed would accrue to the properly constituted combinations, and which have in many instances, doubtless been realized to a considerable extent.

EVILS OF MONOPOLY

6. Without devoting undue space to a discussion of the ethical features of trusts or combinations, it may not be inappropriate to consider for a moment the evils which in the public mind seem to be indissolubly associated with them. First of all is the dread of monopoly. To what extent this fear is justifiable it is difficult to determine. Even where a combination has a virtual monopoly, there is a practical limit beyond which it cannot advance its prices. If this limit is exceeded, demand for the article ceases, substitutes therefor are devised, or the pressure of public opinion becomes so great that the most strongly intrenched monopoly must be effected by it. On the other hand a monopoly is probably effective in influencing prices in that they can be maintained at substantially the same level, in the face of reduced costs of production due to the introduction of improved manufacturing processes, thus depriving the consumer of the benefit of at least a part of the widening margin between cost and selling price which would probably accrue to him under the regime of competition. It will be argued by others, however, that the greater profit results entirely from the economies of combination, and that therefore the additional margin equitably belongs to the producer, as the consumer, under competition, would have been no better off than is now the case.

At a meeting for the discussion of economic questions, a prominent socialist recently described the material advantages which, he argued, would accrue to the workingmen, if the productive agencies of the industrial world were placed under their control and operated for their benefit. A well-known political economist in reply expressed his belief that if these agencies were so controlled and operated, the net results under the relatively unskillful management that would then ensue would be so much less than under the present conditions, that each workingman would receive no more than he does at the present time. The same thought may be true as to prices; if under competition there is economic waste, and in combination there is economy, would not the increase in costs under the former necessitate prices equal to those under a monopolistic regime? These questions of costs, prices, and monopoly are, of course, too far reaching to be properly discussed within the limits of a paragraph, but they are

now the source of so much public debate, with the possibility of an attempted public control, that they demand our thoughtful consideration.

The temptations of fraudulent promotion and speculative management are other evils ascribed to the combinations. It is claimed that earnings which were used as a basis of capitalization have been overstated, either intentionally or ignorantly, by the failure to include among the expenses of operating the full cost of maintaining the property, or a proper provision for renewal of the plant through whose operation the earnings were produced, but which must obviously deteriorate in value because of that use, or become obsolete through the introduction of improved appliances. The more serious charge has been made and proved to the satisfaction of many, that constituent companies acquired at one price by the members of a syndicate have been sold directly or indirectly to themselves as directors of the holding company at greatly enhanced amounts. Speculative management, with one eye on the ticker, and the other on the profit and loss statement, has been alleged, with the attendant evils of a property "skinned" to show large earnings, or the payment of dividends unearned, or at least unwarranted from the standpoint of financial expediency.

It is alleged that the holding company adds to the complexity of corporate organization, admits of the accumulation of debts in the affiliated companies, the piling up of deficits in some companies without provision therefor in the accounts of the parent company, and by other devices tends to obscure the real profits or losses, thus leaving the stockholder utterly in the dark as to the actual value of his holdings.

Numerous remedies have been proposed to prevent some of the foregoing evils. The trend of public opinion at present seems to be toward federal regulation and compulsory publicity. It would appear that a reasonable degree of federal supervision, or at least the issuance of a federal license to do business, would be welcomed by the larger corporations in preference to regulation by the individual states, each one imposing different conditions. Publicity, within reasonable limits, is rapidly being voluntarily adopted, and it seems reasonably certain that corporations conducted as "blind pools" will ultimately be relegated to the past.

ACCOUNTS OF A CORPORATION

7. It was stated at the beginning of this paper that accounting principles, if sound, are applicable to any particular form of accounts; therefore, with a subject as comprehensive as the one now under consideration, it does not seem feasible to do more than discuss those accounting principles which should control in the inauguration, administration and presentation of the accounts of industrial enterprises, without attempting to deal with details or to describe the particular form which the accounts should assume.

The accounts of a corporation may be called the history of its financial transactions, or, as the writer's perceptor was accustomed to remind him constantly, they should be "records of the facts." A fact would seem to be capable of but one interpretation, and we should therefore, if not otherwise informed, be led to expect that a statement prepared from the books would be an exact reflection of the facts of its financial transactions. But in practice no such simple or ideal condition will be found to exist. The modern business organization is so complex, and its transactions so numerous and so varied, that the facts are sometimes difficult to ascertain, and frequently are of such a character that they fall under the category of opinions rather than certainties. Further, the operations of a business are intended to be continuous, and at no time is it contemplated that there will be a final cleaning up in which every asset will be realized on and every liability disposed of; therefore, while the fact as to the current transaction may be known, the amount to be ultimately realized may be uncertain, and the best that can be done with the accounts is to organize them intelligently and administer them on sound accounting principles, so that when a statement is prepared it will reflect an honest opinion as to the company's financial position and the results of its operations.

BALANCE SHEET OF HOLDING COMPANY

8. The principal accounts of a corporation, or, at least, those which are perhaps of the greatest interest to the management, are the balance sheet and the income and profit and loss statement.

The balance sheet of a holding company is not necessarily a particularly complicated statement. If the holding or parent corporation is a finance company simply, as distinguished from an operating company, its chief assets will usually consist of the securities of the

subsidiary companies of which it is the owner. Quite frequently the entire capital stocks of these subsidiary companies will have been acquired by the parent company, and the latter may also be in possession of some of the bonds which lie against the property of the subsidiary companies.

Frequently, other large items of assets are advances made to the subsidiary companies for which the latter may have issued their notes in favor of the parent company. Such advances are usually made to provide for extensions or additions to the plants of the subsidiary companies after they have been acquired by the holding company, or they may have been made for the purpose of furnishing additional funds to purchase larger stocks of materials, to carry contracts requiring considerable time to complete, or for any other legitimate business purpose. If the moneys advanced have been for the purpose of adding to the plants of the subsidiary companies, it may be that these loans will subsequently be funded by the subsidiary companies through the medium of mortgage bonds, which if sold to the public will enable the subsidiary companies to discharge their debts to the parent company. Or possibly, if the whole of the authorized stock of the subsidiary company is not outstanding, a further amount may be issued and delivered to the parent company in settlement of the advances, thus changing the form of the asset on the holding company's books from an account receivable to a security ownership. It is improbable that such a course would be pursued except in very special instances, as the holding company would doubtless prefer to appear as a creditor of the subsidiary company, rather than as an owner of more shares of its capital stock, because, if the subsidiary company were unprofitable and it became necessary to wind it up, the holding company would claim, with the other creditors, its proportion of the realizations from the subsidiary company's assets. Such a position, we believe, would be assumed by the holding company in the absence of direct ruling to the contrary, but serious doubt has been cast recently on the ability of a holding company to sustain such a contention, where it is the owner of the entire capital stock issue of the underlying company.

Advances made by a parent company to its subsidiary companies are not always represented in the latter by tangible property. Such advances may have been made to recoup the subsidiary company for

losses sustained by it in operating. The advances appearing on the books of the parent company would, under such conditions, be nominal assets only, and as such, in a balance sheet of the holding company they should be offset by a reserve sufficient to provide for the whole or such part of them as may be represented by losses.

It is probable that among the assets of the holding company there will be included capital stocks of companies, a minority interest in which may be all that is owned by the holding company, or at most it may be a majority holding and not a complete ownership. Unless there has been a marked depreciation in the value of such holdings, they would be included in the balance sheet at their respective costs, but if it is apparent that they have suffered a radical and permanent decline, they should be written down to an amount which will represent their actual worth.

The liabilities usually call for no particular comment, as, if they are clearly stated, they will be self-explanatory. The capital stocks and bonds issued by the company will generally appear as major items, followed by loans payable and accounts payable due by the company. It is possible that some of the subsidiary companies may, through funding operations, have acquired a temporary surplus of cash, which they have deposited with the parent company, and which consequently will appear as liabilities of the latter. The other liabilities will include the reserve and sinking fund accounts and miscellaneous items.

9. Consolidated Balance Sheet. The foregoing remarks are intended to apply to the balance sheet of the holding company *per se*. It is now very generally recognized, however, that the submission of the balance sheet of the holding company only, does not furnish the owners of the company with the information as to its real financial position to which they may justly consider themselves entitled.

The holding company was, as heretofore stated, organized for the purpose of acquiring the capital stocks of affiliated companies, and thus affecting a combination which would bear the test of adverse legal scrutiny. While each company under this scheme retains its corporate identity, and is in the eyes of the law a separate corporation, yet there is a virtual consolidation of ownership, the results of which can be properly expressed in a statement of their accounts only by consolidating the balance sheets of all the companies into one balance

sheet, eliminating therefrom the inter-company stocks, bonds and accounts, which indicate the relation of one company to another, and not to the public.

A consolidated balance sheet therefore is intended to reflect the financial position of the whole group of affiliated companies, considered as one undertaking. In a typical balance sheet of this character, the following grouping of the assets and liabilities has been adopted:

<i>Assets</i>	<i>Liabilities</i>
Property Account.	Capital Stock of Holding Corporation.
Deferred Charges to Operation.	Capital Stocks of Subsidiary Companies not owned by Holding Corporation.
Investments.	Bonded Indebtedness.
Sinking and Reserve Fund	Current Liabilities.
Assets.	Sinking and Reserve Funds.
Current Assets.	Surplus.

When a holding company purchases the capital stock of another company, the price paid for this capital stock presumably represents the holding company's estimate of the value of the equity in the subsidiary company's asset. This price may be greater than the combined capital stock and surplus account of the subsidiary company, in which event the difference must be assumed to denote the value of the subsidiary company's goodwill, or other assets not appearing on its balance sheet, otherwise, if they were included there, the cost of the capital stock to the holding company would be exactly equal to the combined capital and surplus of the subsidiary company. On the other hand, if the price paid by the holding company, for the capital stock of the subsidiary company, is less than the combined capital and surplus, the difference must be assumed to express the amount at which the assets of the subsidiary company are overvalued on its books.

In consolidating the "Property" accounts of the subsidiary companies (their property accounts including goodwill, trademarks, franchises, etc., as well as tangible property), the total must, therefore, be increased or reduced by as much as the cost of the capital stocks of the respective subsidiary companies, as at the date of their purchase by the holding company exceeds or falls below their combined capital and surplus account.

It might seem at first thought that the surplus accounts of the subsidiary companies should not be applied as stated in the foregoing paragraph, but that they together with the surplus accrued subsequent to the purchase by the holding company, should be combined, and their aggregate entered on the consolidated balance sheet as the surplus of the whole undertaking. The fallacy of this statement has been proven in various ways. Perhaps the most simple and direct argument is somewhat along the following lines: the surplus of a corporation, generally speaking, represents the balance of earnings which have accumulated from its operations, and which have not been paid out to the stockholders, applied in immediate reduction of valuation of assets or reserved for the ultimate replacement thereof. As a surplus can accrue only during the operating of a company, it is fairly obvious that the holding corporation prior to its organization cannot have earned such a fund, and that therefore it would be entitled to merge into its consolidated surplus account only the balances of profits accumulated by the subsidiary companies during the period of their ownership by the holding corporation.

Further, as the amount paid by the holding company for the capital stock of a subsidiary company represents the holding company's estimate of the equity in the subsidiary company, and as that equity is presumed to be represented by its capital stock and surplus account, it follows that in the process of consolidating, the capital stocks of the subsidiary company in the holding company's books will be eliminated, as will be the capital stock and surplus account on the subsidiary company's books. The surplus account being thus absorbed, cannot of course, appear again as a surplus in the consolidated balance sheet.

10. **Inventories.** The consolidation of the other items of assets, which would be included under the groups noted on a previous page, will probably call for no particular comment, except in the case of the inventories. Some of the industrial enterprises of the present day begin their ownership with the raw materials, and manufacture their output all the way from the first stage to the last. Necessarily this manufacturing cannot, in every instance be performed in one continuous operation or by one plant, and there will be constant transfer from one company to another of product finished up to a certain point, but subject to further manipulation in order that it may be disposed

of in a different form. At the end of the fiscal year or other balance-sheet period, there will doubtless be a quantity of such merchandise in the inventories of the several subsidiary companies, purchased by one company from another at a price greater than the actual cost of manufacturing. As the companies are entirely distinct from each other, it may be argued that the purchasing company will be justified in including such merchandise in its inventory, at the price paid to the company from which it was acquired. The purchase, however, having been made by one subsidiary company from another, is in effect merely a transfer from department to department of virtually the same corporation, and not a sale on which the profit can be said to have been realized. The principle that profits must not be anticipated would seem therefore to be applicable in such instances, and it would follow that a reserve should be provided equal to the amount by which such merchandise at inter-company prices exceeds its actual manufacturing cost.

Too hard and fast a rule should not be drawn, however, even when conditions are such as have been outlined above. In the case of an iron and steel combination, for instance, controlling the manufacture of its products from the ore in the ground to the sale of the finished merchandise, it will be appreciated that there are a number of points in the process of manufacture, where the merchandise reaches a finished and marketable stage. While at each stage in the manufacturing process some of the merchandise is sold to outsiders, much of it is transferred to other mills for further manipulation at a price which includes some profit to the subsidiary company by which it was handled. Is it entirely unreasonable to claim that where the manufacturing processes are distinct and complete, some manufacturing profit shall be taken in the current income account on merchandise finished by one company, but remaining in the inventory of another company while awaiting further transformation. In the balance sheet of a large industrial enterprise, such profits are applied as a separate part of the surplus account, distinct from the ordinary accumulation of surplus, with a note appended setting forth clearly the nature of the item.

11. **Capital Surplus.** In the organization of many corporations, it has been the practice to issue bonds or stock equal to the amount at which the property purchased is offered by the vendors, and accepted

by the directors, subject to the cash requirement of the state in which the corporation may have been chartered. In addition, a sum of money is sometimes provided by the vendors for working capital, or a certain number of shares of stock may be turned back into the company's treasury, to be sold and the proceeds used for the same purpose. It has been held by the legal profession, that inasmuch as the property purchased, for which the company's securities were issued, has been declared to be of a reasonable value and necessary for the purposes of the corporation, any contribution which may be made by the vendors is in the nature of a donation, and as such is surplus or profit to the company. While technically, this may be true, yet practically it cannot be a profit, first because a corporation cannot earn a profit before it has begun operating, and second, such a return of cash or securities on the part of the vendors is really in the nature of an abatement of the purchase price, and as such would be deductible from the cost of the property acquired. It has been held, that if the item is noted as capital surplus or designated by some synonymous expression which will clearly distinguish it from the surplus accumulated out of the earnings during the operation of the company, this will be sufficient, but it would seem to be more logical to apply it as a reserve or as a deduction from the cost of the properties purchased.

12. Subsidiary Company Balance Sheet. In preparing the consolidated balance sheet from the holding company's and subsidiary companies' balance sheets, it is, of course, essential that the latter shall have been correctly stated.

The first item or group of assets in the subsidiary company's balance sheet that claims attention will be the account or accounts representing the fixed assets owned by the corporation, which may appear under the inclusive title of "Property" or which may be entered under the several captions of land, buildings, machinery, goodwill, franchises, etc.

As long as the present method of capitalizing on the basis of earnings is in vogue, and the property acquired by the new corporation is valued at a lump sum, it is improbable that a separation thereof will be made into accounts which will show the value of its land, buildings, and other tangible assets, apart from the so-called "water." So much loose talk has been indulged in respecting the evils of over-capitalization, as to lead to the idea in the mind of the public that the

whole difference between the value of the tangible property and total of the property account is "water" only, which ought to be squeezed out.

That there is water in many of the stock issues, no one will deny. Capitalization has been determined in many instances, not on earnings reasonably certain of realization, but on prospective earnings of years to come, or on economies of combination and profits of monopoly that could not possibly be realized. But when the capitalization of a concern is based on an average of earnings, and fixed at such an aggregate sum that reasonable dividends may be paid, proper reserves provided, and a sufficient surplus accumulated, then it can hardly be said that it is overcapitalized, even though the value of the tangible assets may not measure up to its capitalization. The difference between the two simply measures the then value of the goodwill, patents, trademarks, franchises, or other intangible assets of the company, but such assets in a case of that kind cannot be considered as "water." As long as the business continues under conditions not less favorable than at its beginning, the intangible assets will retain their value. If the business fails, their value will probably disappear, as will also disappear the major part of the value of the so-called tangible assets. The worth of each depends on the continuance of the business, but as it is contemplated that a business will continue there is a real equity existing in such a case which cannot be ignored or of which the owners cannot justly be deprived.

There is, however, a strong tendency at the present time to attempt, with respect to the railroads at least, an appraisement of their physical property to ascertain how it compares with their capital obligations. How far reaching this movement may prove to be cannot be foreseen, but it may not be unsafe to predict that ultimately the capitalization of corporations taking over a going business will represent the actual tangible property plus what the results of past operation will show to be a reasonable amount for goodwill, franchises, etc. When that time is reached it will likewise doubtless be required that the balance sheet shall set forth separately each class of property, and the valuation at which it was acquired.

13. **Charges to Fixed Asset Accounts.** In the consideration of accounts of land, buildings, and machinery, arises numerous questions, respecting depreciation, obsolescence additions, improvements, etc.,

all of which have a direct bearing on the balance sheet in that the proper valuation of the said assets therein depends on the correct solution of these questions. It is necessarily difficult to dissociate them from the income account as well, because that account will likewise be affected according to the way these questions are decided.

With respect to items which may properly be considered as capital expenditures, it has been suggested as a working basis that no additions should be made to the property accounts unless it can be clearly shown that they have increased the earning capacity of the plant. A simple, positive rule such as this might be all that is required, if the changes in the plant and the resulting increase in earning capacity were occasioned only by actual extensions or additions of property which had never before existed. But such is not the case. In every progressive manufacturing concern, alterations or additions to the plant are constantly being made for the purpose of simplifying the manufacturing processes and thereby increasing the output with the same expenditure for labor and materials, or in order to decrease those operating charges which are in the nature of overhead expenses required to be taken up in the cost of the product. As no alteration or addition to a plant is probably ever undertaken except for the purpose of increasing the earning capacity thereof, directly or indirectly, the literal application of the rule referred to is not possible, and it will be necessary to consider the nature of the various alterations, improvements, and additions, before an intelligent decision can be made as to their ultimate disposition.

At the outset, it may be conceded that actual extensions or additions to plant which did not exist before, will be properly chargeable to capital account, assuming that such additions do not render useless an existing but less efficient plant producing a similar kind of product.

The large class of expenditures consisting not of certain definite additions, but rather of alterations and improvements, is more difficult to deal with. In the case of improved appliances displacing less efficient ones, it has been held that the latter should be written off and the former added to the property account. Technically, this would seem to be correct, and if there is a direct saving in operation, or a relative increase in output, this course would seem to be justifiable. But if the new appliances are required in order to cope with a com-

petitor having like facilities, or to meet the demand of the trade for improved articles at the same price, it would be more conservative to consider such additions as having the nature of extraordinary renewals, whose cost would be charged off within a reasonable period through the depreciation or renewal reserve appropriations.

Improvements to the plant which indirectly tend to simplify manufacturing processes or to lessen fixed operating expenses would also technically be chargeable to capital account, but a conservative application would call for their absorption in the current profit and loss account.

In so far as the records of the foregoing expenditures are concerned, it is clear that the cost of each should be clearly set forth in the accounts, distinct from ordinary renewals and repairs. If one is furnished with a brief explanation of the improvement, the saving sought to be accomplished by its use, the cost of the improvement and the cost of the property displaced, it is possible to decide intelligently whether the item should remain as a permanent capital addition, be absorbed through a renewal reserve fund, or be charged off immediately in the current year's operations.

A discussion as to whether or not specific amounts should be written off goodwill, franchises, patents, trademarks, etc., would, under present conditions, probably be little more than academic. Nevertheless, the policy in force in the most conservatively managed of the large corporations of absorbing a part of their earnings in adding to the physical property, is in effect a writing off of such intangible assets. If continued for a sufficient number of years, the additions to the property charged against the surplus account, would ultimately take the place in the property account of the goodwill, franchises, etc., so that the property account would consist of tangible physical assets only. Assuming that the accounts have been kept in such a manner as to show clearly the cost of the additions so written off this practice is to be commended. The stockholders thereby become accustomed to these charges against the profits, and are less likely to demand larger dividend distributions, while the application of the earnings to the improvement of the property tends to maintain the earning power, admits of continuity and stability in dividend disbursements, and prevents to a considerable extent violent fluctuations in the market values of a corporation's securities.

14. **Deferred Charges to Operations.** In the development of a corporation's property and in connection with its current operations, there are frequently certain expenditures made of such a character that they are not justly chargeable immediately to the operating costs, nor on the other hand should they be included with the permanent property or the current assets. Instances of important items of this class are advance payments of royalties and costs of exploration and testing preliminary to the development of properties containing raw materials. Other examples of relatively less important items are unexpired insurance premiums, rentals paid in advance, prepaid discounts, etc. Advance payments of this character are usually found grouped under the caption of "Deferred Charges to Operations," the purpose being to carry them temporarily as assets, and then charge them off to the operations of the periods during which the benefit of the expenditures is reaped.

In addition to expenditures which are without doubt chargeable against future operations, there are certain others which are not so clearly defined, but which may with some degree of reason, be included therein. Business operations of certain kinds run in seasons—that is, during spring and early summer the whole effort of the sales department and to some extent the administrative forces, may be engaged in booking orders for delivery during the winter. Before the winter delivery begins the end of the fiscal period arrives, with the result that there will appear among the expenses of the fiscal period, a large amount incurred directly in connection with the next season's output. It would seem, under such conditions, not unreasonable to carry over such expenses as deferred charges, and write them off during the succeeding year. It may be argued that the expenses of one season will offset another, and that it is easier to absorb such items in the operation of the fiscal period during which they happen to have been incurred. This is unquestionably the more conservative method, but in the event of the transfer of the business at any fiscal period, there is an equity existing not shown on the books, which must be taken into consideration.

Occasionally a corporation, perhaps engaged in the manufacture of some patented or trademarked article, may inaugurate a campaign of advertising, in which it is proposed to concentrate in one year the advertising that would usually be spread over two or three years.

Here again it may be claimed with some show of reason that a part of the advertising cost should be carried over to be charged off in the following years. If there is a reasonable prospect that the effect of the advertising will continue during the succeeding one or two years, probably no valid objection could be made to such action, provided it is done in good faith.

Discounts on bonds have, in the past, usually been considered a proper charge to capital, and as such have been added to the cost of the property. The price at which a bond may be sold depends primarily on the rate of interest paid and on the security afforded. If the security is unusually good the rate may be low and the bond still sell at par; if the security is good but not unusually so, and the rate fairly low, the bond will sell at a discount; if the security is poor the bond will sell below par, even though the rate is high. The cost to the corporation of obtaining funds from the sale of its bonds therefore depends largely on the assurance which it can afford the investors that the interest payments will be maintained and the principal paid at maturity. Convinced of these two factors, the selling price of the bond becomes to a considerable extent a matter of interest rate. If the rate is high the bond should sell at a premium, in which event the company will receive a sum in excess of the amount it will eventually have to repay, and this excess sum or premium will in effect act in reduction of the the high interest rate. If the rate is low and the bond sold at a discount, the company will be obliged to bear the expense of the interest and ultimately also the difference between the realization from the bond and its par value—*i. e.*, the discount. A discount on a bond is therefore an adjustment of the interest rate, and as such should be spread over the term of the bond, the balance not charged off to be carried in the meantime as an asset of the deferred charges class.

15. **Liabilities.** In stating the consolidated liabilities, few questions of principle are likely to be encountered. Under capital stocks will be included the stock issues of the holding company, and, separately stated, such part of the stocks of the subsidiary companies as are not owned by the holding company. The balance of the capital stocks of the subsidiary companies, being virtually inter-company accounts, will be eliminated in the process of consolidating.

The bonded debt of the holding company, as well as that of the subsidiary companies, whether guaranteed or not by the holding

company, will appear, excepting that bonds of the subsidiary companies owned by the holding company will be eliminated, as it is the purpose of the consolidated balance sheet to show the financial position of the affiliated group of companies with respect to the public and not to each other.

16. **Sinking Fund.** A sinking fund for the redemption of bonds is in effect a surplus accumulation because the fund is not disbursed for current expenses, but is used merely to retire liabilities, thereby increasing the stockholders' equity in the property. The usual sinking fund provision requires, however, that a stipulated amount shall be provided out of the profits each year, hence it is necessary that a transfer of the required amount be made from the profit and loss account to a sinking fund reserve. If the sinking fund theory is carried out, funds equal to the amount so transferred will either be paid over to the trustees, placed on deposit and earmarked as being for sinking fund uses, or invested temporarily until required for the redemption of the bonds. If the value of the property on which the bonds were based is maintained without impairment, the sinking fund accumulation will, when the bonds are redeemed, properly revert to the surplus account; but if the property is of a wasting character and has depreciated in value to substantially the same amount that the sinking fund account has accumulated, then the latter is really in the nature of a depreciation reserve and should be so applied.

The investments made out of sinking fund accretions and the unexpended balances of cash will appear among the assets under the classification of sinking and reserve fund assets. Bonds redeemed by the trustees of the sinking fund will be applied among the liabilities in reduction of the respective bond issues in which they originated, the effect being to show under the funded debt liability only the balance actually outstanding.

17. **Reserve Accounts.** It is quite likely that among the liabilities will be found, in addition to the sinking fund accounts, numerous reserve accounts accumulated out of current profits or surplus, to provide for renewals or replacements of plant, losses by fire or accidents, shrinkages in receivables, and for any other contingency which may arise.

With respect to these reserves which are collected as a preparation against fire losses, accident claims, bad debts, etc., there are

probably no accounting principles involved which merit particular attention. Experience will, no doubt, have demonstrated in each of these cases the amount which should be set aside from year to year to cover losses arising therefrom. It is true that unusual and unexpected losses may be incurred through fires or accidents, but if the reserves therefor are based on sound principles, the amounts set aside and the losses charged against them ought to be fairly equal during a series of years. Even if this should prove not to be the case, the losses from such sources admit of being definitely ascertained after they have been incurred, and the reserve accounts may then be adjusted accordingly. If the reserve is more than exhausted the balance should be written off and not carried forward with the hope that during the succeeding period the losses may be so small that the account will be recouped.

18. **Depreciation.** When the subject of reserve for depreciation and renewals is approached, discussion thereof is attempted by the writer with some hesitation. Books and pamphlets are being published thereon, the best accounting thought of the country is being directed thereto, Federal and State accounting authorities are struggling with the problem, and the whole matter seems at present to be in a formative state. Happily, material progress has been made in that the *fact* of depreciation is now generally admitted, whereas it was formerly strenuously denied or at least ignored. Once there is brought home to the management a realization of the absolute necessity of providing reserves for the depreciation or obsolescence of their property, it leaves open only the question of determining the methods and rates by means of which the reserves will be accumulated.

Depreciation may be defined as the impairment of the value of an asset by reason of wear and tear. Exception has frequently been taken to the recommendation that a charge be made against the profits to provide for depreciation, on the ground that the repairs and renewals charged to operating have been sufficient to maintain the effectiveness of the asset unimpaired. In the case of business long established, which is managed along conservative lines as respects charges to capital account, and which maintains its plant at a high level of efficiency, it is probable that the renewals charged to operating will aggregate an amount substantially equal to that which would be considered a fair charge for depreciation. So far then as the

statement of profits or losses of a particular period is concerned, there would then be no material difference in the results, if the depreciation charge were substituted for the renewal costs, and the latter applied against the depreciation reserve fund previously created, assuming that the renewals were fairly well equalized from year to year. From the standpoint of the balance sheet, however, such a method is unsatisfactory, in that there will then have been made no provision for accrued depreciation, with the result that the assets will appear at cost, notwithstanding the fact they must have deteriorated in value because of wear and tear.

Further, during the earlier years of an enterprise when the plant is new, the maintenance and renewal costs will naturally be much smaller than will be the case when the effects of its use are being felt, and if no charge is made against the profits for depreciation, there will be a virtual overstatement of profits and possibly an excessive distribution of dividends, which will have to be made good in one way or another later on.

It may be argued that when an enterprise is in its infancy its earning power will naturally be small, and therefore the charges made against it for future provisions should be correspondingly light; the theory being that the increase in profits will be sufficient to meet the cost of the renewals as they become necessary and still leave the net earnings unimpaired, while the enhancement in the value of the enterprise as a whole, due to the larger earnings, will offset any accrued depreciation that may exist. While this was doubtless true of some of the earlier enterprises, notably the street railways, its continued application is fraught with danger. Combinations of undertakings which have themselves been established for some time, are certainly not new enterprises in the sense that they are about to cultivate a virgin field, from which they anticipate the reaping of increasing profits. Assuming that additional profits are realized through the consolidation, they have usually been more than anticipated, and the charges against them have been fixed accordingly. It would therefore seem to be extremely unsafe for a combination of industries to fail to provide liberally for accrued depreciation, and in the meantime to pay out practically all its earnings in dividends, on the ground that the increase in profits from year to year will be sufficient to take care of the necessary renewals and replacements.

A more important factor than wear and tear in determining the effective life of an operating asset is that of obsolescence. Buildings or machinery are seldom abandoned because they are worn out. Usually long before that condition is reached they have become antiquated or otherwise so unfitted to cope with current requirements that their effective life is at an end, notwithstanding their actual condition may still be good. In making provision for the renewal or replacement of an asset, obsolescence, as well as wear and tear, must therefore be taken into consideration.

If the life of a property were maintained merely by ordinary repairs, its value would decrease year by year until it arrived at the scrap stage, if in the meantime it had not become obsolete. Provision for renewal under such conditions would be based on an estimate of effective life, which had regard only for the factors of diminishing value due to ordinary wear and tear, and possible obsolescence. But in practice, it will be found that a property does not lessen in value from year to year in regular gradations. When a part of the plant reaches a comparatively ineffective stage, it is quite likely that it may be substantially rebuilt and perhaps positively improved by the addition of new devices, so that it practically begins a new lease of life, and its effective existence is correspondingly lengthened. The question then arises as to whether the provision for renewal shall be sufficient to cover the cost of the property spread over the life term thus augmented, and the cost of rebuilding or renewal, or whether the reserve shall have regard only for the first cost of the item, leaving the rebuilding or renewal charges as they occur to be taken care of in current operating.

The former has been suggested as the correct method, since charges against operating will otherwise be less each year than should be the case except in those years when the rebuilding or renewal takes place, during which periods it would be excessive.

The practical objection met with will doubtless be that it will be very difficult to estimate with any degree of accuracy the probable cost of rebuilding and the length of the augmented life term; also, that having estimated these factors and established a reserve fund, it will be equally perplexing to distinguish between repairs which should be charged direct to current operating, and renewals which are chargeable against the reserve fund.

It is impossible to lay down any hard and fast rule which will apply to all cases. Industrial statistics respecting renewals and depreciation covering any considerable period are probably not yet available, and changes in manufacturing methods have been so frequent up to this time, that obsolescence would seem to have been the determining factor in limiting the life of a plant unit, rather than depreciation due to wear and tear.

As to the value and term on which to estimate the renewal reserve charge, would it not be reasonable, at least for the present, to endeavor to estimate the life of a machine or other part of the property, on the assumption that it will continue to be used in the same form as when acquired, in the meantime being maintained by ordinary repairs, but not rebuilt or redesigned; then over such estimated life term, spread the first cost of the machine. If a machine is rebuilt, the value that has been exhausted will presumably have been provided for through the renewal reserve. The first cost of the machine may therefore be reduced by the renewal provision, and the cost of rebuilding or a part thereof added, thus arriving at a new valuation for the rejuvenated appliance, on which a new estimate of life will be made and for the exhaustion of which a new renewal reserve will be provided. At the best, the depreciation reserve charge will be an estimate and one can hardly do more than use the best information available, exercise good judgment, and make the appropriation in good faith, with a due regard for conservatism.

As to the expenditures chargeable to operating as ordinary repairs, and those properly applicable to the reserve fund provided for renewals, there will also be a divergence of opinion. It might be laid down as a working rule, that if the operation of a machine or other property unit is discontinued in order that it may be overhauled thoroughly, and substantial parts replaced or improved devices added so that only minor repairs will be necessary for a long time to come, such work would constitute a renewal or rebuilding, the cost of which would be chargeable against the fund.

19. **Income of Holding Company.** The income of the holding company is derived principally from dividends on the stocks of the subsidiary companies owned by it. If the dividends declared by the underlying companies whose operations have been profitable exhaust substantially all their earnings for the fiscal period, and if the provision

is made in the holding company's accounts for losses incurred by those underlying companies whose operations have been unprofitable, then the net income account of the holding company will show correctly its profit for the fiscal period which may be under consideration.

From the point of view of the stockholder, however, an income statement so prepared is unsatisfactory, while from the standpoint of the directors, such a form is inadvisable because it does not disclose the information that it is reasonable to assume should be furnished to the owners, and in the case of reckless or dishonest management it paves the way for manipulation.

Since the major part of the income will be derived from dividends of underlying companies, it would be quite possible for them to declare dividends which more than exhaust their earnings, and which encroach upon the surplus earned during a previous period, or accumulated prior to their acquisition by the parent company. In either event, a dividend under such conditions would not represent the earnings of the year, and the income of the holding company would therefore be overstated to the extent that the dividend exceeds the current earnings of the underlying company. On the other hand, if the operations of the subsidiary companies have resulted unfavorably, the withholding from the income account of a reserve for the subsidiary company's losses will also result in an overstatement of the holding company's profits. The understatement of the profits would, under such conditions, also be quite feasible. Further, the very much condensed exhibit of net earnings which appears in the income account of the holding company, provides the stockholders with no data relating to the gross receipts, operating expenses, fixed charges, appropriations for reserves, and other matters pertaining to the administration of the group of companies of which they should be informed in order to judge intelligently as to the efficiency of the management.

20. **Consolidated Profit and Loss Account.** It is therefore generally recognized by accountants that as the consolidated balance sheet should be substituted for the balance sheet of the holding company, there should likewise be submitted a consolidated profit and loss account in place of that of the holding company.

Most of the comment that is applicable to the consolidated balance sheet is pertinent to the consolidated profit and loss account.

In the consolidated profit and loss account transfer of profits from subsidiary companies to the holding company, through the medium of dividends, will be ignored, and the earnings, expenses, and charges of the several companies will be combined and stated as though the corporation were one enterprise.

In the consolidated statement, therefore, will appear the entire gross earnings of the group of affiliated companies. Such gross earnings will represent cumulatively the operations of the several underlying companies—*i. e.*, merchandise transformed into a marketable condition by one company and transferred to a second company for further manipulation and sale in a different form, would appear in the gross earnings of each company, and their aggregate in the consolidated profit and loss account. While on the surface it would seem that there is a duplication of gross earnings under this method, it is probably the only practical way in which to state them where there is a large number of companies with very many manufacturing processes.

Again, as the property accounts of the various subsidiary companies are consolidated in the balance sheet, it would seem that the gross operations of those companies should likewise be aggregated in order to show the relation of the volume of business to the property investment.

From such gross earnings will be deducted the entire operating costs incurred in producing those earnings, the balance resulting being then subject to the addition of income of a miscellaneous nature, and the deduction of expenses which are not applicable directly to the manufacturing and producing operations.

In stating the consolidated income and profit and loss account, there will probably be some difference of opinion as to the point at which charges other than for ordinary operating should rest, in order that the current net earnings of the undertaking may be shown. It is fairly clear that from the gross earnings must first be deducted the costs in labor, materials, and operating expenses, incurred in producing those earnings, in order that what we shall call a manufacturing profit may be shown. It is true, that in industrial enterprises, including mining, land and water transportation, as well as many forms of manufacturing, such an expression is in a sense a misnomer, but as the mining and transportation are really tributary to the manu-

facturing, the title may stand. It is true also that there are so many different kinds of products, with varying rates of profits, included in the gross earnings, that comparatively little use can be made of the figures as a basis of comparison from year to year. Nevertheless, as it is impossible in a condensed statement to show the volume and profit of each line of business, the aggregate figures will give the stockholder some information as to the total business, and, in a rough way, the rate of profit thereon for comparison with preceding periods.

From the gross profit so ascertained, should be deducted the administrative, selling and general expenses, virtually common to the whole enterprise, and chargeable against the operations as a whole. The resulting balance would be subject to adjustments because of extraordinary items relating to operating, but which cannot be included fairly in the current operating costs; and by income from investments, other than those representing the holding company's ownership of the subsidiary companies.

At this point it would seem that the profit and loss account as such should rest, the resulting balance being a profit or loss that may be said to represent the operating earnings or losses of the group for the fiscal period. These figures are the ones with which those interested in the enterprise are most concerned, as they reflect the rising or falling prosperity of the company.

The balance then carried forward from the current profit and loss to the income or general profit and loss account will be reduced by reason of reserves for depreciation, replacement, sinking fund requirements, etc., which are properly appropriated out of current earnings. Logically, such items should be deducted before the balance of current profits is struck, because the depreciation and replacement reserve at least are charges directly connected with operating, but as heretofore remarked, depreciation statistics are not sufficiently accurate, and the practice of reserving for depreciation is not yet common enough to justify the inclusion of such charges with the ordinary operating costs. Further, if they are stated separately, attention is drawn to the fact that reserve for depreciation has been made, and to the amount of that provision.

The balance of profits, after deducting the foregoing reserves, shows the position of the earnings with respect to the interest payable on the debt of the subsidiary and holding companies. It may be

held that interest on bonds of subsidiary companies (being a lien which must be deducted by the subsidiary company from its earnings before it can appropriate the remainder to the holding company) should be applied before the balance of current earnings is shown. It is suggested, however, that it is preferable to embrace all of the interest on the funded debt of the companies in one group, in order that the total thereof may appear; also because the bonded debt of the subsidiary companies may change by reason of new securities of the holding company being issued in lieu thereof, or it may be reduced through the operation of the sinking funds, in either of which events the interest charge would be lessened, and a comparison of operating profits from year to year disturbed.

After the deduction of interest on the bonded debt, the balance remaining represents the profits available for dividends. The advisability of distributing it in dividends is another matter, however, and if the management is conservative, a large sum will doubtless be applied towards new construction work, thus, as has already been remarked, "squeezing out the water," or, to put it more fairly perhaps, replacing the intangible assets with tangible physical property.

21. **Monthly Balance Sheet.** The accounts of a corporation are intended to disclose the company's position as respects its debtors, its creditors, and its owners.

Its relations to its debtors arise through the charges made to them for the sales of its products, or from the debits of various kinds. Its liability to its creditors is created through the purchase from them of moneys, services, and materials, required in the conduct of its business operations. No abstruse accounting theories are involved in either of these two relations, as their ascertainment is dependent only on the correct use of the proper means.

The accounts which exhibit the company's position as respects its owners, or their representatives, the management, are more involved, and for that reason the discussion in this paper has been limited substantially to accounting problems or principles relating to these internal accounts.

Not many years ago it was considered that if the results of the operations of a business and its financial position could be shown once a year, or, at most, at the end of semi-annual periods, a more frequent statement was not necessary. When business units were

much smaller than at present, competition less keen, and the number of those interested in each enterprise fewer, such a practice was fairly satisfactory, although there were apt to be surprises in store when the results of the fiscal period were disclosed.

In this present era of huge enterprises, however, a year, or even six months, is too long to conduct a business without knowing definitely the result; therefore, each month the management requires that there be placed before it statements showing how the company stands, and what it has earned or lost. Hence there have been introduced the monthly balance sheet and profit and loss account.

In preparing these monthly reports, it is, of necessity, essential that accrual accounts of various kinds shall be established, by means of which such expenditures as interest, taxes, insurance, and items of a similar character, which are paid at more or less infrequent intervals may be "spread" equitably over the year's operations and only the proper proportions of each appear in the monthly statements. No particular difficulty will be encountered with respect to these charges, as it will be quite possible to determine them with reasonable accuracy.

22. Stock Accounts. The part of the work that occasions the most embarrassment and the one in which the possibility of error is greatest, is the ascertainment of the monthly inventory of the company's product finished and in process, and its current materials and supplies. It is comparatively easy to formulate a plan for handling stock accounts, by which the unused or unsold balances of materials and product may be shown from time to time, but the practical application of the scheme will be much more difficult.

In theory, all that is necessary is that accounts shall be kept with the several articles, singly or in groups, into which accounts will be charged all of the items purchased or made at their cost, while out of the account will be credited those used or sold at the same average of cost, the balance representing those remaining on hand and their cost.

Assuming that proper allowance is made for waste, and that suitable provision is made for obsolete merchandise or for shrinkages in value, the remainder would be the inventory value which would be included in the balance sheet. In practice, it will be found that many possibilities of error exist, and that eternal vigilance is necessary if the book inventory is to be accepted as correct.

Materials stored in large quantities may lose in weight or value; some are of such a character that the manufacturing operations will not permit of the ascertainment accurately of the quantities used from time to time; others, while nominally under the control of the stock-keeper, may be physically located in various parts of the plant, and when used may not be reported; stock clerks may be careless and issue materials without making a record thereof; in these and many other ways errors occur which disturb the correctness of the book balances. While it may be admitted that only a certain percentage of efficiency can be expected in stock accounts, nevertheless the information obtained from them and the saving effected through their use, far outweigh the possible weaknesses. If kept with reasonable accuracy they show the quantity of each kind of supplies or product on hand from time to time and thus tend to limit overbuying, while at the same time directing attention to merchandise in danger of becoming obsolete; they discourage waste by requiring accountability, either by bringing the physical control of the materials under the storekeeper, or at least under his supervision, so that when used they become a matter of record; they are virtually indispensable if correct cost accounts are to be kept, and they are essential in preparing the monthly balance sheet.

23. **Cost Accounts.** Closely associated with the stock accounts and the monthly reports of operations are the cost accounts. While the matter of cost accounting is still in a formative state, it must be recognized that great progress has been made in this department of accounts within the last few years. It has doubtless been the experience of every one, that, being called upon to audit the accounts of a manufacturing concern, the accountant might during the course of his work discover that in some corner of the office or shop, there were being kept some mysterious books which purported to be cost accounts. Not the slightest trace of this system would be found in the general books of account, and no attempt was made to reconcile or test the results shown by the cost accounts with those appearing in the commercial books. As a result, the cost accounts would sometimes show that large profits were being earned, but when the commercial books were closed, this alleged profit would melt away in some strange fashion, until the balance might even be upon the other side.

As the necessity of securing accuracy in cost accounting became

more apparent, it was recognized that a cost system conducted upon practically a single entry basis throughout was unreliable, and that it should dovetail into and be controlled by the general books of account. Hence, in the modern system of costs, instead of the stock records, the cost system and the general books of account being carried on as independent groups, they interweave one with the other and thus become what may truthfully be called a system.

It is impossible to frame a cast-iron system that will be applicable to every line of business, and one should beware of attempting to make the business fit the system, rather than adapting the system to the requirements of the business. Where the manufacturing units are large, it may be relatively easy to keep the cost of each, charging thereto the materials used and the labor spent in constructing it, together with its proportion of the general expenses. When the articles are small and the number of each large, it will be feasible to ascertain the cost in lots only.

Probably no great difference of opinion will exist with respect to the items which should be included in that part of the cost made up of materials and direct labor. As to materials there is usually no doubt, but in the case of labor there is sometimes a twilight zone between productive and non-productive labor, which makes it difficult to determine how they shall be apportioned. As a general proposition, it is perhaps safe to say that all labor that can be definitely identified as belonging to a particular piece of work, should be charged thereto, but no rule can be formulated that will cover every case. Wages of foreman or laborers might in one instance be classified as productive, if the operations were such that they were limited exclusively to one piece of work at a time, whereas ordinarily such expenditures would be included in the non-productive classification.

The proper distribution of the so-called "overhead" expenses is one problem that causes the accountant much anxious thought. A large manufacturing establishment has many departments, in some of which are used machines costly to purchase and expensive to operate; while in others the equipment may be limited to small tools, representing a small investment and occasioning but little expense in their operation.

The productive labor in the first instance may be small in proportion to the cost of maintaining and operating the equipment; while

in the latter case the reverse would be true. If the combined expenses of the two departments are distributed on the basis of direct labor, it will manifestly result in the one case in charging too little to the cost, while unduly loading it up in the other. However, when all of the product of the factory passes through substantially all the departments, the productive labor basis is perhaps the most convenient and equitable way of apportioning the expenses. An excessive charge in one department will be corrected when the product reaches the next stage, so that in the end a reasonably correct distribution will have been made if the volume of work is fairly uniform and the expenses do not fluctuate violently. A concern manufacturing small tools which successively pass through the forging, grinding, polishing, and handling departments, might be cited as an example of the foregoing method.

The distribution of departmental or machine group expenses on the basis of the productive labor of each department or group of machines might be used advantageously in the case of a concern whose manufacturing processes are relatively simple, and whose product passes from the raw material to the finished stage with comparatively few rests.

If the manufacturing processes are complex and the cost of each part at every stage must be ascertained, the machine rate basis is probably the most accurate method of apportioning the expenses. Under this plan the cost of maintaining and operating each machine tool is determined as accurately as possible, the number of hours it will be used under normal conditions estimated, and then the resulting rate per hour is assessed on each piece of work passing through the machine.

CORPORATION ACCOUNTING AND INVESTIGATIONS

24. Preliminary to taking up the question which has been placed in my hands, as the basis of this paper, I think it well that we should give consideration to the principles involved in an examination of the accounts of concerns where amalgamation or consolidation is being discussed.

The nature and extent of the accountant's investigation will depend, of course, largely upon his instructions; but we will assume that manufacturing concerns in the same line of business contemplate consolidation; that the report of the accountant upon each of the plants is to form the basis of the consolidation, and that the accountant's instructions are general and not specific; and that they include the determining of the assets and liabilities as well as the earnings.

Accountants differ as to the scope of an investigation. There are those who take the position that the accountant is not expected to make the thorough examination that a regular audit would entail, but that the genuineness of the books and of the balance sheet should be assumed. Most accountants, however, believe that the investigating accountant should analyze the accounts thoroughly, in the doing of which, fraud, if any, would be discovered.

Regular audits and special investigations have, or ought to have, the same end in view—the obtaining of a correct statement of facts.

ACCOUNTANT'S REPORT

25. I cannot well see how an accountant can accept and prepare a report from any balance sheet without satisfying himself by a sufficient analysis of the regularity of the accounts and of the methods followed by which the various items which enter into the assets of a concern, or which go to make up the revenue and expenditure accounts, are produced.

Statements covering each of the concerns examined should be included in the report of the accountants independent of each other,

and based upon the specifications which have been set out, should contain information as follows:

- (1) *Assets*, as of a given date (the same in each instance), divided as to:
 - (a) Realty.
 - (b) Plant and machinery.
 - (c) Merchandise (raw material).
 - (d) Merchandise (in process).
 - (e) Merchandise (finished product)
 - (f) Leasehold.
 - (g) Goodwill.
 - (h) Patents.
 - (i) Accounts receivable.
 - (j) Bills receivable.
 - (k) Cash on hand and in bank.
 - (l) Bills receivable under discount (indirect).
 - (m) Accrued interest, insurance, etc.
 - (n) Such other divisions of the assets as the nature of the business may demand.
- (2) *Liabilities*, as of a given date (the same in each instance), divided as to:
 - (a) Bills payable.
 - (b) Accounts payable.
 - (c) Mortgage indebtedness.
 - (d) Bills receivable under discount (indirect).
 - (e) Other indirect liabilities.
 - (f) Capital account.
 - (g) Such other division of the liabilities as the nature of the business may demand.
- (3) *Revenues and Expenses* of each business showing earning power of each in a given time (usually three years if the business has been in operation so long) and preferably covering the same period.

Taking the items in these divisions in their order, the accountant will ordinarily not be called upon to verify items *a* to *h*, the land, buildings, stock in-trade, leasehold, etc., being specially valued by independent valuers. If not, and these are subject to verification by the auditor, he should in the case of:

- (a) Realty. Call for the title deeds and see that the account is not charged with fictitious increases in value, or with the annual taxes, as I have found in certain instances.
- (b) And that a sufficient allowance has been made for depreciation (in buildings, etc.).
- (c), (d), (e) Merchandise, raw, in process, and the finished product. Get certified inventories, which should be checked both as to extensions and additions; an independent appraisalment is altogether preferable. Compare inventory with invoices in the case of raw material. To see that profits are not anticipated, a careful inspection of cost accounts is required. In case of manufactured stock care must be exercised to see that office and selling expenses are not pro-rated and added to the costs of goods appearing in the inventory. Note should be taken of the "dead wood" in the stock and that proper allowance has been made to cover.

- (f) Leasehold is not usually a consideration, but if found to exist, a special valuation to ascertain present value is best; otherwise, the original cost, less proportionate reduction for the expired period should be taken.
- (g) Goodwill. This item can only be determined by agreement between the parties, and is one which does not seriously concern the accountant, except that if it is put in at an arbitrary sum by the vendors, he should see to it that the price be set forth separately and distinctly in the "assets" so that the purchasers may know just how much they are expected to pay.
- (h) Patents. See that these are entered at their proper present worth—which will be determined by the remaining life thereof, and the present "state of the art" in that particular connection.
- (i) Accounts receivable. A careful examination should be made to ascertain the condition of these, that they are alive and collectible, and that proper provision has been made for bad and doubtful; also that secreted in the accounts receivable may not be found charges for "goods on consignment" billed out at the usual profit and going to swell the volume of output, thus unduly increasing the earnings by the "anticipation of profits."
- (j) Bills receivable. Same examination as in the case of accounts, so far as prospects of realization are concerned.
- (k) Cash on hand and in bank. The same verification as in a regular audit.
- (l) Bills receivable under discount. This is an indirect asset as well as an indirect liability, and it is important in the case of an amalgamation, where the liabilities are being assumed, that information on this point should be given. It may be necessary that some allowance should be made in anticipation of "loss upon realization."
- (m) Accrued interest, insurance, etc. That the claim for these is fair and proper.

Turning next to the question of liabilities, we take up:

- (a), (b), Bills payable and accounts payable. The verification will be the same as in a regular audit. In this connection it may be proper to say that there is not much danger of the liabilities being overstated. The principal danger lies in the understating or not taking to account of the outstanding liabilities, and this must be carefully guarded against if the transfer of the business involves the assuming of all the liabilities.
- (c) Mortgage indebtedness. Verification by the obtaining of a statement from the mortgagees, both as to principal and arrears or accrued interest.
- (d) Bills receivable under discount. The remarks under item *l* in assets would properly apply here, being applicable in both cases.
- (e) Other indirect liabilities. These may be in the nature of endorsements (although a strictly improper and illegal proceeding in the case of joint stock companies) claims for damages, disputed accounts for materials, services or commissions. A distinct statement in writing as to the existence or non-existence of these should be obtained from the proper officers of the company.

- (f) The value of the business to the purchasers will be represented by the difference between the assets and liabilities in each case and if profitable should equal the issue of capital stock with an addition to the assets of any undivided profits, which would enhance the value of the equity to be transferred to the amalgamation.

SPECIAL POINTS INVESTIGATED

26. The question of revenue and expenses of operation will in all probability more particularly occupy the attention of the accountant, rather than the ascertaining of the value of the assets and liabilities; in fact, as I have stated before, his instructions may limit him to the determining of these without regard to the other. Taking the revenue accounts first: the accountant will require to make a careful investigation of the receipts for the period (usually three years) under examination. He will see that no extraneous revenue has been introduced and that the progress in the revenue account has been consistent and steady, or otherwise. He must be watchful that the revenue account has not been increased by credits for goods "on consignment" with an off-setting entry to accounts receivable.

Other points which require to be looked into are: that goods "on approval" likely to be returned to stock afterwards have not found their way into the sales account; that fictitious sales, for the purpose of swelling the revenue have not been put through the books, and shipments not made before close of inventory; that incompleting and unshipped orders have not been credited to sales account, thus inflating revenue by ungained profits; that rebates and allowances are a charge against sales and not an addition to merchandise account. In a word, the *bona fides* of all sales especially near the end of the period should be determined to the satisfaction of the accountant.

It is the duty of the accountant to see that all the expenses entered are a proper charge against the business and that they are made within the proper period; that there is no reduction in expenses towards the close of the term under inspection; that the expenses are regular and consistent and bear a steady ratio to the turnover; that proper and reasonable allowances have been made for repairs and renewals, and that these are charged against revenue and not as an increase of capital.

Excessive profits from any particular cause should be noted, as, for instance, those which might arise from the making of heavy pur-

chases in anticipation of an upward tendency in prices, and which anticipation had been fulfilled. He should be satisfied that all profits earned and taken to account are incidental to the business. A sale of real estate not required for the purposes of the business, and made at a substantial profit, forms an example. On the other hand expenditures of exceptional and unusual character which have gone to reduce the profits below normal should be noted.

In the consideration of the cost of operation heed should be given to the effect which a limited capital has had upon the expenses of operation. Lack of capital is naturally followed by increased borrowings, and increased borrowings augment the interest account. Operation is thus charged with a sum, which, had adequate capital been invested, would have been in the nature of a dividend. By way of illustration, I have in mind a business in which every dollar of capital invested was borrowed. This may appear an extreme case, but such is, nevertheless, sometimes to be found. The borrowed capital represented \$100,000. Upon this sum interest was paid out of the business and charged to operating expenses. I am asked to investigate and find this condition. In the preparation of the profit and loss account I eliminate the \$6,000 interest paid on this sum in order to arrive at the earning power of the business. It can readily be seen how unfair any other course would have been, and how lack of sufficient capital in any business will impair the earning power and affect the showing as to profits, unless allowance be made therefor. There is no room here for the exercise of a display of good judgment on the part of the auditor in determining what the "adequate capital" should be.

Reports in detail upon each business should be prepared and furnished the principals, and these should form the basis upon which the amalgamation is carried out. Regard, of course, will also be had to the introduction of other interests where more extensive operations are contemplated by the amalgamating company.

FORM OF CERTIFICATE

27. In addition to the report in detail a certificate is usually prepared for use in the prospectus. This certificate is generally barren of all information except as to the revenues, expenses of operation, and profit-earning power of the various businesses entering the amalgamation, and these in the aggregate. Indeed, certificates are not uncom-

mon where information is given only as to the profits earned by the several businesses. It is unusual to see any reference to the amount of capital invested. It occurs to me that a model certificate would be one framed somewhat after the following style:

CERTIFICATION

Gentlemen—I beg to advise that I have examined the records of The Brown Manufacturing Company, Limited, and of the Jones Manufacturing Company, Limited, each for a period of three years, and certify to the correctness of the underwritten statements, as to Capital, Earnings, Expenses of Operation, and Net Earnings, covering the period given:

BROWN MANUFACTURING CO., LIMITED				
	Net Capital Employed	Earnings	Expenses of Operation	Net Earn- ings
1898.....	\$.....	\$.....	\$.....	\$.....
1899.....				
1900.....				
Total..		\$.....	\$.....	\$.....
JONES MANUFACTURING CO., LIMITED				
	Net Capital Employed	Earnings	Expenses of Operation	Net Earn- ings
1898.....	\$.....	\$.....	\$.....	\$.....
1899.....				
1900.....				
Total..		\$.....	\$.....	\$.....
COMBINED COMPANIES				
	Net Capital Employed	Earnings	Expenses of Operation	Net Earn- ings
1898.....	\$.....	\$.....	\$.....	\$.....
1899.....				
1900.....				
Total..	\$.....	\$.....	\$.....	\$.....

For further information reference is made to my reports in detail herewith.

JOHN THOMPSON,
Accountant.

I fully appreciate that the less detail there is in the report the better, for the obvious reason that much of it would not be understood by the average individual, and the tendency would be to befog rather than enlighten, and that is very undesirable. But I do think that an accountant issuing a certificate framed as above, with a simple qualifying reference to a report for further and detailed information will be placing himself upon safe and sure ground.

EXAMPLE

Illustrative of the fact that the ground which I have covered up to this point includes practically all that is necessary in connection with the examination of the accounts for the purposes mentioned, I now present for your benefit a memorandum of agreement, which was the basis of a recent consolidation with which we had to do.

BASIS OF CONSOLIDATION

A corporation is to be formed under the laws of the State of Michigan, with a paid-up capital of ten million dollars, to be apportioned into six per cent preferred stock and common stock, as the parties interested may hereafter determine.

This corporation is to purchase all the assets, property, goodwill, etc., of all the four companies and to pay therefor in preferred and common stock and by an assumption of the indebtedness of each company.

The amount of preferred and common stock, to be paid to each company, to be determined by the value of the net tangible assets and the valuation placed upon the earning power of each company.

In placing a value upon the tangible assets, same to be reached as follows:

- (1) The land, buildings, machinery, tools, and patterns, to be determined by appraisers, to be chosen by a majority of the committee made up of one appointed by each of the companies; on failure of this committee to agree on appraisers the selection to be left to the committee who present their suggestions.
- (2) Inventories of raw materials, work in progress and manufactured stock to be taken, and valuations placed thereon by the individual companies, and this to be done under the supervision of a disinterested party, to be named by the committee.

The inventories are to be made as of the same date, and to be taken at substantially the same time.

When completed the inventories are to be passed and agreed upon by a committee consisting of a representative of each of the companies and one to be named by the committee. The decision of these five to be binding.

- (3) In reaching the value of the earning power of the several companies, consideration is to be given to the following details:
 - (a) That profits are incidental to the business and have not been anticipated.
 - (b) To the charging to operating expenses of items, exceptional or unusual, and which have had the effect of reducing profits below normal.
 - (c) The effect upon the earnings of the money paid out as interest upon borrowed capital, in case it be found that the borrowings (loans) made by the several companies are disproportionate to each other.
 - (d) That all charges to operating expenses are proper charges against the business and that they are made for and during the proper period.
 - (e) That proper and reasonable allowances have been made for repairs and renewals and that these have been charged against earnings.

- (f) That charges against earnings for depreciation are adjusted upon an equitable basis.
- (g) Such other matters as appear from an examination of the accounts and which would prejudicially affect the earnings of any of the companies, either advantageously or disadvantageously.
- (h) The value of the earning power to be determined by a consideration of the business done by each of the several companies for the three years, 1903, 1904, and 1905.
- (i) Accountants to be selected by the committee and questions which may arise as to treatment of various matters and about which there is difference of opinion, to be determined by the committee.
- (j) All costs and expenses incurred in making appraisals, examination of accounts, or of performing the other duties in connection with the formation of the proposed new company to be charged to and borne by the new company; should the new company not be formed, then such costs, expenses, and disbursements to be borne by the four individual companies in proportion to the number of men employed by each.

A. C. P. A. PROBLEM

28. We will now take up the question which I have been asked to work out.

This question evidently originated in the State of Pennsylvania, as I should assume, from the fact that reference is made to the payment by the corporation, of taxes, etc., due the State of Pennsylvania on the formation of the corporation. To make this question applicable to that state, I have included instead the franchise fees required under the laws of the State of Michigan, which are paid to the Secretary of State upon the basis of one-half of one mill upon each dollar of the authorized capital stock. Following is the question:

PRACTICAL ACCOUNTING

The following statement of affairs which was taken as being correct, was made to the proposed underwriters for the consolidation of four corporations, under a corporation to be formed to take over all the four corporations.

It was understood and agreed that the stock of Corporation No. 1, par value of which \$100.00 should be purchased at \$135.00 per share.

Corporation No. 2, Stock per \$100.00 at \$120.00 per share.

Corporation No. 3 “ “ 50.00 at 50.00 per share.

Corporation No. 4 “ “ 25.00 at 41.00 per share.

It was also agreed by the underwriters that they would advance sufficient money to purchase said stock, the whole of the stock of the proposed corporation to be turned over to them, together with \$200,000.00 of the bonds of the new company.

That sufficient bonds is issued to retire the bonds of the old corporation and provide for \$500,000.00 of treasury bonds to be used in betterments.

In addition to the above it was agreed that the underwriters would purchase at least \$250,000.00 of the new bonds at 85%.

It was agreed also that the par value of the stock of the new corporation should be \$100.00 per share, and that sufficient stock should be issued to cover 20% more than the cash outlay of the underwriters for the purchase of the stock of the old corporations.

It was also agreed that the new corporation should take over the assets of the old corporations, but that each of the old corporations should be clear of indebtedness except for bonds issued.

The assets turned over to the new corporation were to be as follows:

CORPORATION No. 1

Cash.....	\$ 48,000.00	
Plant.....	450,000.00	
Supplies.....	90,000.00	
Book % Receivable.....	184,000.00	\$772,000.00
Bonds.....	350,000.00	
Capital Stock.....	350,000.00	\$700,000.00

COPORATION No. 2

Cash.....	\$ 70,000.00	
Plant.....	820,000.00	
Supplies.....	80,000.00	
Book % Receivable.....	270,000.00	\$1,240,000.00
Capital Stock.....	850,000.00	
Bonds.....	390,000.00	\$1,240,000.00

CORPORATION No 3

Cash.....	\$ 28,000.00	
Plant.....	420,000.00	
Supplies.....	42,000.00	
Book % Receivable.....	135,000.00	\$625,000.00
Bonds.....	280,000.00	
Capital Stock.....	350,000.00	\$630,000.00

CORPORATION No. 4

Cash.....	\$ 110,000.00	
Plant.....	1,475,000.00	
Supplies.....	86,000.00	
Book % Receivable.....	432,000.00	\$2,103,000.00
Capital Stock.....	150,000.00	
Bonds.....	1,890,000.00	\$2,040,000.00

Form the new corporation with sufficient stock and bonds, the bonds to draw 5% interest, to meet the requirements of this agreement, charging into plant a/c all taxes and fees due to the State of Michigan, on formation of the corporation, together with a counsel fee of \$20,000, as well as other compensation under this agreement, and give a statement showing the result.

At the end of the year it is found that \$250,000 of the bonds of the corporation have been sold to the underwriters and used for betterments.

The results of the business for the first year show a profit of \$1,000,000, after charging off 10% for depreciation on plant.

Declare such a dividend as in your judgment is reasonable, crediting surplus with whatever balance remains, and give a statement of condition, using your own figures in ascertaining the profit.

SOLUTION

Capital Stock									
No. 1 -	\$350,000.00 @ 125	437,500.00							
No. 2 -	150,999.00 @ 120	181,198.80							
No. 3 -	350,000.00 @ 100	350,000.00							
No. 4 -	150,000.00 @ 164	246,000.00							
- Cash value of stock		1,174,698.80							
Add 20%		234,939.76							
Stock of new corporation							250,620.00		
Bonds									
No. 1 -		350,000.00							
No. 2 -		350,000.00							
No. 3 -		250,000.00							
No. 4 -		150,000.00							
		1,050,000.00							
Treasury Bonds		500,000.00							
To Underwriters		200,000.00							
Total							1,800,620.00		
Assets									
Cash No. 1 -		450,000.00							
No. 2 -		70,000.00							
No. 3 -		25,000.00							
No. 4 -		110,000.00					250,000.00		
		655,000.00							
Plant No. 1 -		450,000.00							
No. 2 -		82,000.00							
No. 3 -		42,000.00							
No. 4 -		147,500.00							
		621,500.00							
Counsel Fee		20,000.00							
Compensation to underwriters		61,770.00							
Compensation to shareholders		250,500.00							
Franchise Fee, Mich		17,531.00					406,245,310		

SOLUTION - continued

Supplies No. 1-	70000.00				
No. 2-	80000.00				
No. 3-	42000.00				
No. 4-	86000.00	298000.00			
Accts. Rec. No. 1-	184000.00				
No. 2-	270000.00				
No. 3-	135000.00				
No. 4-	432000.00	1021000.00			
Assets and Liabilities of New Corporation at Commencement					
Assets					
Cash	256000.00				
Less Council Fee 20000.00					
Less Incorporation Fee 1253.10	21253.10	234746.90			
Plant		4062453.10			
Supplies		298000.00			
Accounts Receivable		1021000.00			
Bonds in Treasury		500000.00			
		6116200.00			
Liabilities					
Capital Stock	2506200.00				
Bonded Indebtedness	3610000.00	6116200.00			

ASSETS AND LIABILITIES OF NEW CORPORATION AT END OF YEAR

CORPORATION INVESTIGATIONS

45

[illegible]

PROFITS OF A CORPORATION

DEFINITION OF PROFITS

29. In the widest possible view, profits may be stated as the realized increment in value of the whole amount invested in an undertaking; and, conversely, loss is the realized decrement in such value. Inasmuch, however, as the ultimate realization of the original investment is from the nature of things deferred for a long period of years, during which partial realizations are continually taking place, it becomes necessary to fall back on estimates of value at certain definite periods, and to consider as profit or loss the increase or decrease between any two such periods. Hence, it follows that, as stated in Buckley's treatise on the English Companies' Acts, "the ascertainment of profit is in every case necessarily a matter of estimate and opinion. * * * The legitimate way is to take the facts as they actually stand and after forming an estimate of the assets as they actually exist" (and presumably, although it is not so stated, of the liabilities) "show a balance so as to ascertain the result in the shape of profit and loss."

This definition would permit any business concern to revalue periodically the whole of its assets and liabilities and to record the difference between its surplus so ascertained at the commencement and the end of the year as its profit or loss, respectively; and provided that this estimate were fairly and reasonably made, there would be no objection to such a course. In other words, every appreciation of assets is a profit, and every depreciation a loss; and in many private concerns this method, technically known as "Single Entry," of ascertaining profits has been regularly adopted for years without bad results. A corporation, however, being endowed by statute with special privileges is subject to special restrictions, among others that of a definite fixed capital stock upon which dividends are declared out of the profits of the undertaking. Hence, the consideration of profits as applied to a corporation involves the consideration also of the limitations placed either by law or by sound principles of accounting upon their distribution as dividends. It is in the legal interpretation of the term profits of a corporation (which has come to mean profits available

for dividends), and in the distinction between the strictly legal and conservative accounting view of the principles upon which they should be ascertained that the difficulties of the subject chiefly lie.

LEGAL PRINCIPLES

30. The law, represented mainly by Case Law, has considerably modified the definition given above; and as up to the present time a larger number of cases have been decided and more definite results arrived at by the English than by the American Courts. it will be useful here to consider briefly the present condition of the English Law on the subject. The decisions given there have been based on the principles of Common Law rather than on statutes relating to corporations, and these decisions are freely quoted in American text books, which, though in slightly different form, appear to arrive at substantially the same conclusions. The summaries which follow are given with some hesitation in view of the difficulty of extracting definite principles from a number of more or less conflicting decisions, but they will at any rate serve to illustrate the difficulties which have to be met.

31. **English Law.** The regulations of a corporation in England usually provide that no dividends shall be paid except out of *profits arising from the business of the corporation*. In order to carry on its business a corporation requires certain capital or fixed assets, which must be maintained in a reasonable state of efficiency as long as the business continues; while its profits or losses arise from the employment of its fixed assets in continuously changing the condition of its current or circulating assets from one form to another, and consist of the difference between the realizable value in the final and in the original condition, subject to deduction of the cost of the change and the expenses of realization.

Changes in the value of capital assets are not generally realizable during the continuance of the business, and hence in the determination of profits available for dividend under the above regulation no increment in the value of its capital assets can be considered; but it would seem to be legally permissible to divide among stockholders as dividend a realized profit on the sale of a fixed asset if there were no depreciation on other fixed assets to be made good. On the other hand, it is not necessary to charge trading profits with any decrement of value

not due to causes arising directly out of the business; but any waste of fixed assets taking place in the operation of deriving profits out of the circulating assets must, generally speaking, be made good out of profits. There is, however, an exception to this rule when the constitution of the corporation contemplates the investment of its capital in certain specified wasting assets—such for instance as mines—and its regulations do not call for any provision out of profits to replace this waste by means of a sinking fund or otherwise; in such cases the English Courts have held that there is no legal obligation to charge the waste against profits earned from the operations. But this exception does not cover depreciation of capital assets due to wear and tear which has not been, but must at some future date, be repaired if efficiency is to be maintained. In the case of circulating assets the position is different. The enhancement in the value of these assets being the source of the profits of the business, it is necessary and the law requires that they shall be maintained intact, and that only the surplus realizable in excess of the amount invested is profit; or, conversely, that any deficit is a loss.

The exact distinction between capital and current assets depends necessarily on the nature of the business of the corporation. What are capital assets for one business may be current assets for another, according as the business of the corporation is to make a profit by using them continuously in their existing shape or by converting them into some other shape. For instance, if a corporation owns investments for the purpose merely of collecting the dividends thereon, and dividing these among its stockholders, it is not legally bound to make good out of profits a fall in the value of the investments. But if its business were to traffic in investments, or if it were in fact trafficking in them, any fall in value would be a loss, and any rise in value a profit, chargeable or creditable to profit and loss.

Apart from the distinction between capital and current assets, the following legal principles would seem to be fairly established:

The ascertainment of profit being necessarily a matter of estimate and opinion, all that is required is that the estimates be fairly and honestly made without any fraudulent intention or purpose of deceiving anyone, and that they conform to the constitution of the corporation.

The payment of interest to stockholders before any profits have

been realized is stated to be *ultra vires*; but interest paid on borrowed capital employed in the construction of the works, and in the meantime unproductive, may be properly chargeable to capital account; and it is perhaps doubtful (although there appears to be no decision on this point) whether under such circumstances interest might not be paid to stockholders and charged to capital if the regulations expressly provided therefor.

It also seems probable that a corporation having made a loss on the operations of the previous years, and commencing the year with a deficit in its circulating capital, may legally distribute dividends to its stockholders out of current year's profits without making good such deficit. In one decision on this point a deficit of previous years is treated as a loss of capital assets, and it is stated that the capital having been lost a distribution of subsequently earned profits cannot be a payment of dividend out of capital that had been previously lost.

32. **American Law.** The general law of this country as laid down in the chief text books is based as before stated to a considerable extent on the English Courts referred to above.

Dividends can be paid only out of profits—that is, out of the net increase in the original investment after deducting from the assets all present debts and making provision for future or contingent claims reduced to their present value. But in arriving at this increase the permanent or fixed capital may be valued at the price actually paid for it, although at the time of estimating said increase it could only be sold at a loss. All that is required is that the whole capital originally contributed by the stockholders shall be put into the business and kept there, and that no part of it shall be taken out again directly or indirectly and given back to them. On the other hand, any depreciation due to wear and tear arising out of the use of the fixed assets must be made good out of the earnings before the surplus can be applied to the payment of any dividend, unless these fixed assets are of a wasting nature, such as mines. There seems also to be a consensus of opinion that dividends can only be paid out of the surplus profits derived from the use of the capital of the company for those purposes for which the corporation was constituted.

The Statute Laws vary in every state, but the above principles seem to apply generally, with the exception of certain classes of business governed by special laws — such as banks, which may not pay

dividends out of the interest accrued, but not received, however well secured, and insurance companies, which may not distribute unearned premiums; and in Connecticut it has been held that if at the time of declaration of a dividend the property is not actually worth the par value of the stock which was issued for it, the dividend is illegal.

ACCOUNTING PRINCIPLES

33. From an accounting standpoint, perhaps the only exception that can be taken to the law as at present interpreted is that the latter does not require the maintenance of wasting fixed assets which are used up by slow degrees in the process of earning profits. On practical if not on theoretical grounds the principle must be accepted that a decrease in value of fixed assets not of a wasting character arising otherwise than in the process of earning profits need not be provided for. It is true that in the long run all shrinkage of these assets is a loss, and that no profits can be earned over the whole life of a corporation unless its capital, both fixed and circulating, is maintained intact. But the changes in actual values of capital assets due to lower range of prices, introduction of improved processes of manufacture, etc., may be so great and at the same time so indefinite, and the actual realization thereof is as a rule deferred to such distant periods that it becomes quite impracticable to provide for it as a direct charge against profits; although it is a prudent course to accumulate a sufficiently large *Reserve or Surplus Fund*, and to make liberal provision for *Depreciation*, as will insure the integrity of the investment and provide ample funds for keeping it continually in the highest state of efficiency.

The sound accounting principles for the determination of profits may be summed up as follows:

(1) All waste, both of fixed and circulating assets, incident to the process of earning profits by the conversion of circulating assets must be made good out of the profits earned.

(2) Profits realized on sales of fixed assets should be first applied to make good estimated depreciation (if any) in other fixed assets not resulting from the ordinary conduct of the business. If there is no such depreciation, such profits may be distributed as dividends, but should be distinguished from the operating profits.

(3) A sufficient surplus should be accumulated (in addition to the provisions required to maintain wasting capital assets under clause 1) for the purpose of making good losses due to shrinkage in values of fixed assets arising from causes other than the ordinary operations of the company.

ACCOUNTING PRACTICE

34. Turning now to the practical, as opposed to the theoretical view of the question, it will be useful to consider the different elements which enter into the determination of the profits of a corporation from the point of view of the maintenance of assets, discussing shortly the principles of valuation which should be adopted for the various assets and liabilities in a balance sheet, and the effect which each would have on the profits. If the balance sheets at the beginning and end of a period are theoretically and practically accurate, and show the true financial position at those dates, the increase or decrease of the surplus, after allowing for distributions of profit during the interval, represents the true profit or loss for the period. The different captions will be dealt with in the order in which they would usually be stated.

CAPITAL OR FIXED ASSETS

35. These would in general consist of one or more of the following classes: Real Estate, Buildings, Plant, Machinery, Tools, Patents, and last but not always least, Goodwill and Franchises.

36. **Real Estate, Buildings, Plant, Machinery, and Tools.** Dealing with the first five items it may be stated generally that it is not proper for a corporation to take credit for a profit, nor on the other hand is it necessary for it to charge itself with a loss, arising out of a revaluation of such items as long as they are in actual use for the purposes of the business; but here it should be noted that if the business includes among its objects the purchase and sale of assets of this class they should then be considered not as *Fixed* but as *Current or Circulating Assets*, being in fact stock in trade, the turning over of which is expected to result in profits or losses to the company. The fixed assets now under consideration are those which during the life of the business will remain, whether in their present or some other shape, in a permanent condition, provided that due provision is made for wear and tear or other waste due to operations.

37. **Depreciation.** This raises an issue of great importance, so far as profit is concerned, in dealing with this portion of the company's property. As distinct from fluctuations due to rise or fall in values, there is continually in progress in the case of all property except land, a waste due to the use of these properties for the purpose of

earning profits. In accordance with the accounting principles already laid down, this waste must be provided for out of the resulting profits, or if there have been no profits, the losses are really so much more by the amount of waste resulting from the operations.

No provision as a rule requires to be made for depreciation of real estate, except in the case of leaseholds, minerals, timber or other similar property. A purchase of leasehold property is in effect a payment of rent in advance, and the equivalent rent on an actuarial basis should be charged each year against profits.

In the case of minerals, the product taken out of the land becomes the stock in trade of a corporation as soon as it is extracted, and whatever the land was worth before its extraction it is clearly worth an appreciable amount less thereafter. The provision to be made should be on the basis of the number of tons extracted, having regard to the total tonnage available and to the realizable value of the property after the minerals have all been extracted. The same principle would also apply to timberlands, where no provision is made for re-forestation. The contention is sometimes made that no provision need be made for exhaustion of minerals where the amount of mineral known to be in a definite tract at the end of any period is largely in excess of that which has been discovered at the beginning of the period. This argument cannot, however, for a moment be admitted except as a reason for reducing the tonnage rate to be provided. As a general principle, whatever there was in the land, whether known or unknown, has been reduced during the period under consideration by whatever amount has been extracted; and while the new discoveries may be accepted as reducing the necessary rate of provision for extinction from (say) one dollar to one cent per ton, the original principle that provision must be made holds good on the smaller figure, whatever it is. It may be, of course, that the provisions made in earlier years have been sufficient to cover a number of future years on the basis, from the commencement, of the rate subsequently found to be sufficient in view of the new discoveries, and in this case there is obviously no necessity to provide further for extinction until the total production at the new rate is equal to the total amount written off.

It would be beyond the scope of this paper to discuss what the different rates of depreciation on different classes of property should be, but it is necessary to emphasize the fact that however long the

life of the buildings or plant, and however much may be spent year by year in the actual upkeep thereof, there must be a gradual depreciation in value, due either to direct wear and tear or to the necessity of replacing old and obsolete articles by new and up-to-date ones. It is probable, however, that in any going concern which is maintained in an efficient condition there is a limit to the total amount of this depreciation as between original cost and present value; in fact, the theory that any piece of machinery or any building continues in use until it reaches an absolute scrap value is not in accord with practical experience, taking any plant as a whole. When the plant is entirely new it may be considered as being worth its cost. It will never again attain this standard, because never again will the whole of it be absolutely new; on the other hand, it can never fall below a certain percentage of this standard without becoming so inefficient that it could not be operated at all. Between these limits, therefore, would seem to lie the total amount of depreciation to be provided out of earnings over a long period of years, assuming that all renewal expenditure tending to increase the life of the plant is charged against the depreciation so provided. It is submitted that perhaps the most satisfactory way of making such provision is in the first instance to estimate the life of the different assets, assuming that ordinary recurring maintenance and renewal charges are provided out of profits as they occur, and to set aside each year the corresponding proportion of the original cost, crediting the same to a depreciation fund. From time to time expenditures which may be termed "extraordinary renewals" or "periodical renewals" will require to be made, which from their nature increase the original life of the plant. These should be charged against the fund provided. In this manner an equitable charge would be made against earnings each year to represent the amount of wear and tear that has accrued during the year. In many cases, in place of a basis of life in years, one in tons operated will be found preferable, in which case the charge against profits would take the form of a rate per ton of production rather than a rate per year of life. There are other methods in force for properly providing for this wear and tear, but there is one method which it may safely be stated is an entirely erroneous one, and that is to set aside such sums as the Directors may decide upon out of the profits of each year upon no definite basis whatever. A decision as to the period at

which the necessary charge should be made against profits must be admitted to be largely within the discretion of the managers, for the reason that they have to consider not only sound principles of accounting, but also policy; but it is not inconsistent with this proposition, and is certainly more scientific, to adopt a sound and conservative basis in the first instance and create in the books a subsidiary Suspense Account of the proper amount each year which would be discharged by appropriations made from time to time out of surplus profits. Such a course is, however, at best, a makeshift and it is the duty of all accountants, though they cannot compel, at least to urge, corporations to make adequate provision for depreciation each year.

38. **Patents, Goodwill and Franchises.** The remaining items included in Capital Assets—Patents, Goodwill and Franchises, are very much akin to one another. Theoretically it would seem that if a patent be granted for a term of years the amount paid for it should be written off against the profits earned during those years. But practically it is found that by the time the original patent has expired the corporation may have built up a practical monopoly, or at any rate such a lucrative business that the original cost of the patent is now replaced by the admitted value of the goodwill. Moreover, it is seldom the case that one patent stands by itself; during its life probably many others have been taken out representing modifications which extend the life of the original in an improved form, and these may have cost small sums as compared with the very much larger cost of the original.

Goodwill represents the value of the trade name, business connection and organization of the corporation's undertaking. As long as the earnings of the business are maintained at not less than the level contemplated at date of purchase, it is impossible to allege any depreciation of value or the necessity of any provision therefor. On the other hand, if any serious depreciation has taken place, the profits are probably so much reduced that it is not possible to make such provision. Goodwill is in fact a *Fixed Asset* whose value is to some extent dependent upon the profits earned, its fluctuations being consequent upon and not a cause of the earning of profits, as are wasting or partially wasting assets, and not therefore to be taken into account in ascertaining them.

Franchises may be either perpetual or for a fixed term. In the former case, the same considerations would apply as in the case of goodwill. In the latter case, they may be renewed or terminated at the expiry of the fixed term, and prudence would dictate a reasonable provision each year out of surplus profits, although no definite amount may be ascertainable.

Provided therefore that the wise policy is followed of writing off at once all expenditure on new patents which do not turn out useful, or which supersede or modify older ones, and provided also that the principle is admitted of building up a substantial reserve fund against whatever portion of the capital is invested in this class of assets, it would seem reasonable to merge the three items into one and treat them as part of the permanent invested capital of the business, which may be left to continue at its original value as long as the business is a going concern.

39. **Capital Expenditure.** In completing the survey of the conditions so far as regards Capital Assets, it is well to consider what expenditures may reasonably be added to the original investment of capital, instead of being charged against profits. These expenditures may be divided into the following general classes:

(a) Actual additions to the property, such as new buildings, new engines or new tools, which did not exist before, or additions to existing articles of this class. All such expenditure would be at once admitted as a proper charge to Capital Account.

(b) Alterations to capital assets resulting in increased capacity, some portion but not the whole of which may in most cases be charged to Capital Account.

(c) Alterations to capital assets resulting not in increased capacity but in a lower cost of output. Such items are frequently treated as additions to Capital Account, even by conservative corporations, but it may be doubted whether they should not rather be considered as operating expenses paid in advance, especially if, as in most manufacturing concerns, the processes to which the improvements are applied have only a limited life, after which they will be superseded by other and more modern ways of doing the same thing. In other words, the most conservative way of treating this class of expenditures would be to consider them as deferred charges to operating to be written off over a definite term of years against prof-

its. Among this class may be mentioned change of grade or alignment in railroads which is too frequently treated as a capital charge; the shifting of machinery from one position to another, or a general re-arrangement of a factory; as well as stripping and development work on mineral lands, which is of a capital nature in so far as it is money sunk in the property prior to taking anything out of it, but in all conservatively managed mines is treated in the way indicated above.

(*d*) Alterations to capital assets resulting partly in increased output and partly in decreased operating expenses. In this class much must depend on the nature of the expenditure, but a division between Capital and Operating Accounts on some definite basis arrived at on the principles outlined in (*b*) and (*c*) would as a rule be fair and conservative treatment.

(*e*) Exceptional and extraordinary renewals of existing assets resulting partly in the increased capacity necessary in order to keep pace with more modern plants, partly in diminished operating expenses and partly in a mere replacement. Such expenditures include the modernizing of a property necessary to prevent or to repair a deterioration in its value, due either to the competition of more modern properties or to the greater demands of the public, and consequently not resulting in increased earnings. Here again many corporations will charge part of such expenditures to Capital Account, and would be legally justified in so doing; but undoubtedly the safe and conservative course is to charge them wholly against profits through the medium of a Depreciation or Improvement Fund.

(*f*) Finally, we have ordinary replacements, repairs and renewals recurrent either at long or short intervals, and resulting neither in increased capacity nor in saving in operating expenses. Such would always be a charge against profits, either through the Depreciation Fund or direct, according to the nature of the outlay.

It is important to note that the charges made under any of the above headings should be cost only and should not include any addition by way of profit. The operation is merely a conversion of current into fixed assets, upon which no profit can be realized as long as the asset is maintained. Possibly, however, where a corporation employs in the erection of plant for its own purposes facilities which it would otherwise be employing in similar erections for outsiders

at a profit, it would be fair, although not conservative, to consider a reasonable charge for the use of these facilities as part of the cost of erection. Also when special loans are raised for construction purposes, the interest on such loans during the period of construction would fairly be part of the cost.

40. **Sale of Fixed Assets.** If fixed assets, becoming unnecessary for the purpose of the business, are sold or are abandoned and dismantled, the question arises whether profit or loss arising therefrom should be added to or deducted from the profit arising from the general operations. Legally, if as a result of a revaluation of capital assets a surplus was found to exist, the realized portion thereof may probably be treated as a profit, but not otherwise; and on the other hand there would not appear to be any legal necessity to provide for a loss. As a matter of accounting, the safe policy is to carry forward profits and provide for losses, but the circumstances in each case must be considered. Where the losses are large, as in the case of the dismantling of a whole plant, it would be sufficient to provide for it gradually out of the profits of a series of years.

CURRENT ASSETS

41. Current assets may be dealt with under the following main headings:

Stocks on hand, including Raw Materials, Work in Progress and Partly Finished and Finished Products.

Bills and Accounts Receivable.

Marketable investments.

Cash.

42. **Stocks on Hand.** Perhaps one of the most difficult questions which accountants have to decide is the correct enumeration and valuation of stocks on hand. The theory governing the valuation of this asset is that, inasmuch as no profits can be realized until the goods are actually sold, it is not safe to take credit for any profit thereon until a sale has been effected; that therefore it should be carried forward at the exact cost and no profit thereon brought into the accounts of the fiscal period. On the other hand, it may be found that the prices both of the raw materials and the finished product have at the close of the fiscal period fallen below their cost, and while it is impossible to say until the goods have been sold whether any

loss will ultimately be made thereon, at any rate there is a possibility thereof. It is therefore conservative to set aside a sufficient reserve out of profits which have been realized on goods already sold to provide for the accruing loss on those which remain in hand. Hence the general rule for valuation of stocks on hand—namely, “cost or market, whichever is the lower,” has been evolved and is adopted by the most conservative commercial institutions. Unfortunately, in practice, many concerns are unable to ascertain the cost of their various products, with the result that their stock valuations are based entirely on estimates of costs made with more or less accuracy. There does not appear to be any legal obligation on a corporation to adopt any particular basis, provided that the price adopted is not in excess of that ultimately realized after deduction of any subsequent cost of completion, storage and sale; but the absence of approximately exact knowledge as to the cost frequently leads to disappointment, both to the directors and stockholders, and even to serious financial loss. It is obvious that a constantly changing basis of cost must lead to serious inequalities in the profits shown between one period and another, but it is not equally obvious to the commercial community that an erroneous basis of valuation consistently adopted year after year, even if that basis be a conservative one and really below true cost, may result in large and unexpected discrepancies between the profits shown in different periods. For instance, if stocks be valued on a basis exceeding cost and the trade, and consequently the materials and products on hand, increase very rapidly for one or more years, the profits during those years of increase will be abnormally inflated; but when the trade settles down to a comparatively steady turn-over there will be a considerable drop in the profits as compared with the preceding year on the same amount of business done—a drop which the management as a rule will be unable to account for until an investigation by the Public Accountant discloses the true cause. On the other hand, if the stocks be conservatively valued considerably below cost, the profits of a year in which a small quantity of goods is carried over at the close of the year in comparison with the beginning will be inflated as compared with a succeeding year, when an opposite condition prevailed, although the sales and profit thereon may have been the same in both years; thus entirely upsetting all the calculations and estimates of the managers. The essentials

therefore for ascertaining correct profits so far as stocks on hand are concerned are:

- (a) An accurate enumeration of the quantities on hand.
- (b) An accurate ascertainment of the actual cost of the different manufactured articles, either completed or in progress.
- (c) A specific reduction in the prices of raw materials of the amount by which the market valuations at the close of the fiscal period fell short of the cost.
- (d) A proper provision for all stock which is old or depreciated or for any reason likely to be unsaleable.

The more exactly these different elements are ascertained, the more accurate will be the resulting statements of profits, and if the special reserves be made separately, it will be an easy matter to compare usefully one period with another.

Finally, it should be noted that it is not essential, and in fact it will frequently be incorrect, to value materials and products on hand at the end of the fiscal period upon the same price basis as at the commencement of that period; all that is necessary or proper is that the basis of valuation—that is to say, the principles on which the values are arrived at—should be the same at the beginning and end of the period, the actual prices usually varying from one year to another.

In this connection, it is important to consider to what extent it is permissible to anticipate profits on work in progress, particularly when the work is being carried out under definite contracts, and when it may perhaps reasonably be contended that at any rate some portion of the profit is earned at the time when the work is performed. It is quite a frequent practice where contract work extends over long periods of time to estimate and bring into account some portion of the profit proportionate to the cost for any period, and there does not appear to be any objection in principle to the adoption of this practice. On the other hand it is undoubtedly more conservative not to take credit for any such profit until the whole contract is completed. An added reason for this course is that unforeseen contingencies are continually arising during the progress of the work with the result that what was originally expected to realize a profit may in the end result in a loss. It is true that the more conservative course may cause large inequalities in the amount of profit shown for successive periods; but if the accounts are stated on a basis of

total work completed less cost thereof, the reasons for the fluctuations, as well as the advantages of more rapid completion, are apparent.

If, however, estimates of profits on pending contracts are to be taken into account, it is of the utmost importance that such should be made on an ultra-conservative basis, and further, that estimated losses should be fully provided for. Neglect of this precaution may easily lead to disaster.

While therefore under certain conditions no objection can be taken to the inclusion in a profit and loss account of profits on work in progress, a sound conservative policy would be against such a practice on the ground:

That the best estimates are misleading.

That such profits are not in most cases yet realized and cannot therefore be employed in payment of dividends except by a corresponding increase in working capital.

That the asset of work in progress is unduly swelled by an addition that may perhaps never be realized.

43. Accounts and Bills Receivable. Profits cannot be definitely ascertained until they have been converted into cash or into some recognized form of negotiable instrument of definite and fixed value, but the usual practice is to consider the profit realized when a sale takes place and the amount of the sale price is charged to the purchaser. It is essential to an exact determination of profits to ascertain that as far as possible the purchaser's obligation is good for the face value of the charge made. This is necessarily a matter of estimate and involves two considerations:

An estimate of the ability of the purchaser to pay the amount he has contracted to pay within the time contemplated.

(b) An estimate of the amount which a debt incurred in a foreign currency may be expected to realize in the standard of the home country at the time when the debt is paid by the purchaser.

On the principle of cost or market valuation, whichever is the lower, the conservative and safe course it to make a reserve sufficient to provide for all discounts that will be allowed and for any debts known to be of a doubtful character; or to build up a general reserve fund against such losses, on the basis of a percentage on the sales of each year. From the legal point of view, all that would seem necessary would be to make a fair estimate of what each debt might be expected to realize in the currency of the home country, allowing

for the time estimated to elapse before collection; but a corporation should aim at a more conservative policy than this, and should not be contented with the minimum amount of reserve which it might be legally called upon to make.

44. **Marketable Investments.** The term Marketable Investments is intended to include only such investments as are part of the *Circulating* as distinct from the Fixed Assets. The latter class of investments may be defined as those which cannot be disposed of without affecting the operations, for the reason that the ownership thereof in a permanent form is necessary, however remotely, to the business which the corporation is carrying on. Their valuation would be governed by the same principles as have been outlined above for other Fixed Assets.

Marketable Investments, on the other hand, may be either:

- (a) The stock in trade of the corporation, or
- (b) The investment of surplus cash held in this form until required for ordinary operating purposes, or
- (c) The investment of a reserve or other special fund.

In case (a) the rule of cost or market value, whichever is the lower, applied to each individual investment and not to the group as a whole, is undoubtedly the most conservative. That is to say, no profit could be taken up on any investment until it is sold, but on the other hand, where the value has clearly fallen, some provision should be made therefor. Where, however, the investments all have a definitely ascertainable market value at any time, it is perhaps fair and reasonable to allow a fall in value of some individual investments to be set off against a rise in value of others, provided that the aggregate valuation is not above original cost or market value, whichever is the lower.

In case (b) the usual custom is to value at the mean market price on the last day of the fiscal period for the reason that the investments represent the equivalent of cash and should therefore be maintained at their cash value in the Balance Sheet.

In case (c) any profit or loss, either realized or estimated, would be a credit or charge to that fund, and not to the Profit and Loss Account. But in the Balance Sheet such investments should either be clearly stated as maintained at cost or preferably be adjusted each year to the aggregate market value if below cost.

Another method of dealing with the fluctuations of marketable investments of classes (b) and (c) is to create an investment fluctuation reserve, either out of estimated or realized profits on investments, or by a charge to Profit and Loss of such an amount as may be necessary to prevent this reserve from showing a debit balance, and by charges or credits to this reserve to maintain the asset at market value.

47. **Cash.** This item is the only one which may be said really to represent actual fact as expressed in money value, except when it consists of currency of a foreign country, at a variable rate of exchange. This latter subject is referred to later.

LIABILITIES

46. Inasmuch as the liabilities of a corporation are with very few exceptions definitely ascertainable amounts, no question of principle arises thereon in connection with the ascertainment of profits or losses except that the omission of any liabilities or an overstatement thereof would necessarily increase or diminish the profits respectively. There are, however, some important questions in connection therewith, that is, the proper treatment of premiums and discounts on stocks and bonds issued, sinking funds and secret reserves.

47. **Premiums and Discounts on Stocks and Bonds.** If stocks or bonds are issued for the purchase of any definite property, it may be presumed that the property is worth the par value thereof. But when they are issued for cash or a cash equivalent differing from their face value, important questions arise.

So far as stocks are concerned, it is doubtful how far an issue thereof at a discount is legal at all, and whether if so issued the purchaser or holder is not liable to pay up the whole of the discount, at any rate on liquidation of the corporation. This is the law in England with the exception that it is now legal for a corporation to pay a reasonable commission for services in placing its stock, and it is also the statute law of some states in this country, notably New York. Discount on stock would therefore either be an asset of the corporation recoverable from some person or persons and not chargeable to profit and loss, or the liability on the stock would be the amount actually paid for it. Premiums on stocks issued are clearly a source

of surplus to the corporation eventually, because they are cash received in excess of the authorized capital which must be maintained intact, but they are not profit on operations and should not therefore be credited to profit and loss, although they may presumably be applied to make good depreciation in fixed assets or exceptional losses, not arising out of the ordinary business of the corporation.

Premium and discount on bonds is a deduction from or addition to the rate of interest which the bond carries; that is to say, there is a rate at which any corporation can place its bonds at par; if it elects to place them at any other rate the bonds will sell at a premium or discount as the case may be; but the true rate remains the same and this true rate is the proper charge to Profit and Loss Account. Hence, the premium or discount should be spread over the term of the bonds and the annual installment thereof credited or charged to Profit and Loss each year.

48. **Sinking Funds for Redemption of Debt.** Sinking funds or debt extinguishment funds are not in theory a charge against Profit and Loss, for the reason that they do not represent a loss or expense, but the extinction of an existing liability. Inasmuch, however, as in most cases the only source out of which such redemption fund can be provided is the surplus earnings, it is usual to insert a provision in trust deeds that the sinking fund is to be provided out of the profits of the year. The discharge of liabilities involves either a corresponding reduction in assets or the accumulation of other liabilities or surplus. A reduction in current assets or the accumulation of other liabilities as a substitute for bonded indebtedness is clearly undesirable, and it is therefore necessary that the amount applied each year to sinking fund purposes should be transferred from Profit and Loss either to a special Reserve Fund or in reduction of some Fixed Asset account by way of provision for depreciation or otherwise. It must, however, be remembered that such provision for depreciation will be to that extent represented by capital instead of current assets, and while there is no theoretical objection to this if the depreciation fund is sufficiently large, the latter necessarily ceases to be available in cash for one of its principal purposes, that is, the renewal of various capital assets from time to time. If, however, part of the fixed assets are of a wasting character, the sinking fund may be quite safely applied in reduction thereof, or it may with

equal propriety be applied in reduction of goodwill or patents. The safest way undoubtedly therefore in every case is to charge the sinking fund installment to Profit and Loss each year, and either credit it to a special Sinking Fund Reserve or apply it as depreciation of some fixed asset for the renewal of which no cash expenditure will be required in the future.

49. **Secret Reserves.** There is a general consensus of opinion that an overstatement of profits knowingly made is improper, but the opposite proposition as to an understatement of profits has so far received little consideration, and yet is it of considerable importance. Corporations are the property of the stockholders, and therefore primarily anything which the stockholders or the directors elected by them may approve may be considered to be within their power to decide as they like, provided that it is within the law; and it is not suggested that there is any general law which would prohibit an understatement of profits, as it would undoubtedly prohibit an overstatement. But inasmuch as the stocks of the majority of corporations are quoted on the Stock Exchanges throughout the country, the corporation is in some sense the property also of the public. It becomes therefore a great question to what extent it is legitimate or proper that it should publish a statement of its earnings or its position which materially underestimates either; and yet it is obviously within the discretion of the managers or directors to make reserves to meet possible contingencies, and the constitution and by-laws of most corporations give them such powers. Secret reserves may take several forms, such as writing down to a comparatively small figure valuable assets, providing excessive depreciation, providing excessive reserves for bad debts, or contingencies, valuing stocks of materials and products on hand at a large reduction from cost, or including special reserves under the head of Accounts Payable. Inasmuch as the majority of industrial corporations do not publish their gross earnings, such reserves can easily be made and are made continually in a form in which they do not appear in any way in the accounts, and are known therefore only to the directors and managers.

Each case must be judged on its own merits. Where the directors or managers have exercised a wise discretion in providing in advance for contingent losses which are incident to the nature of the

business and cannot, from a reasonable point of view, be considered as in excess of the amounts which a wise foresight would provide, it would seem that no exception should be taken to the undisclosed provision thereof. Where, however, reserves are made largely in excess of any possible contingencies, the amounts provided should be disclosed in the Profit and Loss Account and probably also in the Balance Sheet, so that all those interested may be in a position to form a reasonably correct opinion as to the financial position. For instance, a business such as banking is from its nature peculiarly liable to large and unexpected losses, the disclosure of which might prejudicially affect its credit and position in the eyes of the public and of its depositors, and possibly cause a disaster out of all proportion to the cause; and it is therefore obviously sound policy to accumulate such ample reserves as will enable losses to be met without any apparent disturbance of normal conditions; but so far as the majority of corporations and businesses are concerned, publicity in such matters is undoubtedly most desirable, and all reserves to meet contingencies which may occur in the future, but have not yet occurred, should be fully disclosed.

FLUCTUATIONS IN EXCHANGE

50. When a corporation is carrying on business in a foreign country the rate of exchange exercises a considerable effect on the valuation of its assets and consequently on its profits. This question is sufficient in itself to form the subject of an entire paper, and it is only possible here to state quite shortly the general principles which should govern its treatment. Where operations are carried on in a foreign country, the object should be to obtain as nearly as possible an exact equivalent in the home country of all revenue earned or expenditure incurred in the foreign country. So long as a transaction originates and is completed in the foreign country, no question of exchange comes into the calculation. Where, however, in the process of its completion it passes from one country to another, a change in the basis of value occurs, which must be reflected in the accounts. The nearest approach to accuracy will be obtained by taking up the foreign item into the home currency at the rate of exchange of the day on which the transaction represented by that value passed from one country to the other. This would result over a given period

in a certain average rate of exchange for all transactions. In the case of capital expenditure, it is probably wise to make that period as short as possible, say monthly. In the case of profit and loss items, it is probably sufficient to make it a year or half year. If the conversions at monthly intervals be used in arriving at the average rate of exchange for the year and the current assets and liabilities existing at the end of the year as well as the profit and loss items be converted at that average rate, all the operations in the foreign country will be found to have been converted into the home currency at very close to the true rate and there will be no difference, or as it is commonly called, Profit or Loss on Exchange. Inasmuch, however, as this average rate may vary considerably from the actual rate on the last day of the fiscal year, it is further customary in preparing a Balance Sheet to reconvert the current assets and liabilities at the latter rate, and the difference between this conversion and that made at the average rate for the year represents an actual profit or loss which would be made if the whole of the assets or liabilities were converted into the home currency on that day. This revaluation is necessary in order that the Balance Sheet may show the actual net realizable value of the corporation's current assets; and the profit or loss thereon is invariably considered a credit or charge to the Profit and Loss Account for the fiscal period. Fixed capital, on the contrary, if recorded permanently in the currency of the foreign country, should be maintained on the basis of original cost without any change from the original rate; and as this gives rise to difficulties it is preferable that such assets should always be permanently recorded in the home currency.

FORM OF PROFIT AND LOSS ACCOUNT

51. Although the question of profits has been considered from a Balance Sheet point of view, their presentation will always take the form of an Earnings Statement, each element in which will be accurately determined if due effect be given to the principles of valuations of assets and liabilities hitherto discussed. It will be useful now to consider shortly the form which such a statement of earnings should take.

The following, already in fairly general use, is submitted as

perhaps the most complete short form, and by means of exhibits it is capable of amplification to any extent desirable:

Gross earnings (whether sales of products, transportation earnings, professional earnings, etc.)	\$.....
<i>Deduct</i> —Cost of Manufacture or Operation:	
(a) Manufacture (for a manufacturing concern):	
Labor	\$.....
Material	
General Manufacturing Expenses	
(b) Cost of operation (for concerns not manufacturing):	
(Under suitable headings according to the nature of the business)	
	
Gross Profits	\$.....
Other Earnings	
	\$.....
<i>Deduct</i> —	
Expenses of sale (manufacturing business only)	\$.....
Expenses of management (if distinct from operation)	
	
Net Profits from Operations	\$.....
<i>Deduct</i> —	
Interest on Bonds	\$.....
Other Fixed Charges	
	
Surplus for the year	\$.....
Extraordinary Profits (detailed)	
Surplus brought forward from preceding year	
	\$.....
<i>Deduct</i> —	
Extraordinary charges not applicable to the operations of the year	\$.....
Interest and Dividends on Stocks	
	
Surplus carried forward	\$.....

A word of warning may not be out of place against the too common practice of throwing back extraordinary charges on to the previous year's surplus without sufficiently disclosing the same. Cases are

frequent in which the earnings for a series of years have been made use of in the public press to show the operating results, and therefore incidentally the earning capacity of a business, while charges made in any year against surplus, on the ground that they appertain to the operations of a preceding year, have been altogether ignored. The form suggested above, if generally adopted, would prevent the possibility of any such misstatements, at any rate without a clear knowledge on the part of those making them that they were altogether misleading.

SPECIAL POINTS IN CORPORATION ACCOUNTING

52. Accounting problems may be divided into two groups:

Firstly. Bookkeeping questions, being those which deal with the correct method of recording any given set of facts, or involve a correct interpretation of facts already recorded; and

Secondly. The more difficult and important problems of ascertaining upon a proper interpretation of legal and other documents, and upon sound commercial and financial principles, the actual facts which have to be or should have been recorded in the books.

In this paper it is proposed to deal briefly with some of the more common of the questions falling under the second of these heads, commencing with the consideration of some special points in connection with the organization of a corporation and the opening of its books.

ORGANIZATION OF A CORPORATION

53. The facts which have to be ascertained and made the basis of the opening entries will be found firstly in the Articles of Incorporation and By-Laws of the corporation which should be carefully studied and all provisions relating to the financial affairs of the business noted; and secondly, in agreements or contracts either for the purchase of some business concern, manufacturing or otherwise, or in relation to the business which the corporation intends to carry on; and out of the provisions of these contracts difficult accounting questions frequently arise.

For the purpose of illustration it will be useful to consider in detail the following assumed case:

A corporation is formed on January 1st, 1909, with an authorized capital of \$1,000,000, for the purpose, among other things, of pur-

chasing a manufacturing business as a going concern. The contract between the corporation and its promoters, dated January 1st, 1909, provides that the business to be purchased shall be taken over as from July 1st, 1908, and that interest on the purchase money of \$900,000 shall be paid to the vendors in lieu of the profits which may have been earned from July 1st up to the date of completion of the purchase. The Statement submitted to the purchasers as of July 1st, 1908, and accepted by them as the basis of the contract, shows the following figures extracted from the books:

CAPITAL ASSETS		
Land	\$ 30,000	
Buildings	90,000	
Fixed Plant and Machinery	180,000	
Loose Tools	25,000	
		\$325,000
CURRENT ASSETS		
Inventories of Manufactured Products, Stores and Material, on hand	\$125,000	
Accounts Receivable	90,000	
Cash	10,000	
		\$225,000
<i>Less: -</i>		
CURRENT LIABILITIES		
For Accounts Payable	25,000	
		200,000
Net Total Assets after deducting Liabilities		
		\$525,000

The books also show that the profits for the three years ending July 1st, 1908, have averaged \$75,000 per annum, and after the purchase has been completed under the contract, it is ascertained that the profits from July 1st, 1908, to January 1st, 1909, have, according to the books kept by the vendors, amounted to \$50,000, and that during those six months a sum of \$20,000 was distributed among the partners or stockholders of the vendor concern.

The net tangible assets to be acquired amounting to \$525,000, and the purchase money to \$900,000, the difference, namely, \$375,000, might at first sight be taken to represent the cost of the goodwill of the business purchased, being the equivalent, it will be seen, of five years' purchase of the average profits, and it is quite probable that this was the actual basis of the contract.

It is no exaggeration to say that in the majority of cases the books of the new corporation would have been opened as of July 1st, 1908, on the basis of that Statement, and the profits earned during the next six months, after deduction of the interest, amounting to \$22,500, payable to the vendors under the contract, would be treated as its profits. A little consideration will, however, show that this is not a correct basis of facts for opening the books of the new company. To begin with, the company did not come into existence until January 1st, 1909, and as it obviously could not acquire property before it existed, it is clear that what it has really purchased is the property not as it was at July 1st, 1908, but as it was at the date of the contract to purchase, which happens also to be that of the formation of the company, viz., January 1st, 1909. Moreover, the contract specifically provides for the inclusion in the purchase of the profits earned (less the interest payable) for the preceding six months; and as the profits so earned, less the sum of \$20,000 distributed, have remained in the business, the surplus assets will have increased by \$30,000 during that period; or rather by \$27,500, since the interest due to vendors up to January 1st, 1909, exceeds the profits withdrawn by \$2,500, which is, therefore, a Liability on that date, and must be taken into account. This increase may be represented either by additional construction expenditure made during that period, or by increased current assets, or by both, and there will probably also be a variation in the current liabilities; but the new corporation is certainly getting in property of one kind or another \$27,500 more than it would have got if the contract had not provided for the acquisition by it of the profits accrued during the six months. It must be assumed, therefore, that the purchase price of \$900,000 is greater by this amount than it would have been if the accrued profits, which are turned over to the corporation when it obtains possession of the property, had not been acquired; or, in other words, that the price actually paid for the goodwill is not \$375,000, but \$347,500.

The importance should here be noted of the three following dates:

- (a) The date of the contract;
- (b) The date as at which the property was to be acquired; and
- (c) The date of the formation of the corporation.

If, for instance, the company had been incorporated on July 1st, 1908, and a contract had been made on the same date and on the

basis of the Balance Sheet of July 1st, but the business was not actually taken over until January 1st, 1909, then clearly, after July 1st, 1908, the business would have been carried on for the benefit of the corporation, and the accruing profits, less interest, amounting to \$22,500, would be profits of the corporation. But under the conditions assumed to exist, it would seem evident that a corporation cannot earn profits when it is not in existence and that therefore if it in any way acquires profits which were earned before the date of its formation, it must in some way have purchased them, as the alternative supposition of a free gift hardly merits consideration.

And yet there is considerable contention at the present time over this apparently simple point. Even where a corporation has contracted to purchase property at an agreed price, and the vendors have further undertaken to provide a certain sum in cash for working capital, some lawyers have maintained that this sum is a profit to the corporation, and can be used for the payment of dividends. But vendors are men of business, and it is not their practice to give something for nothing. A contract must be assumed to be the result of a bargain between purchaser and seller, and whatever the purchaser is to receive under the contract must be set off exactly against what the vendor is to receive; and although in the formation of a large number of modern corporations, the vendors and purchasers, through the intervention of syndicates, are one and the same, the only safe and sound method of accounting is to assume that the same principles apply as in the case of an ordinary sale. It is difficult to believe that, if such a contract formed the subject of legal proceedings, any other view could be taken that the so-called gift for working capital were merely a return to the purchaser of a portion of his purchase money, and should be so treated in the accounts. If the reverse principle were upheld, the sum of \$27,500 in our hypothetical case could be treated as a clear profit to the corporation and distributed in dividends, whereby, it would seem, a portion of the subscribed capital would be returned to the stockholders.

Having disposed of this important preliminary point, it is now clear that the figures of assets and liabilities at July 1st, 1908, are not a proper basis for opening the books of the new corporation, and that a fresh Balance Sheet as at January 1st, 1909, must be prepared. On being advised to this effect, the officers decide on February 28th

to have a revaluation made of all the companies' assets, having reason to doubt the accuracy of this July Statement. It may be remarked that the accuracy of this Statement had surely been substantiated on behalf of the corporation before the contract for purchase had been entered into. But it is a matter for surprise that such contracts involving large sums are still frequently made in sole reliance on statements of financial position furnished by the vendors, who, without any intent to deceive, will naturally make the best showing they can, and may be and frequently are deceived by errors of principle made by their own subordinates. The insistence on the part of the purchasers of an impartial investigation of all such statements by Public Accountants before the contracts are completed, would certainly save large sums of money to future stockholders.

In our case it is assumed that no investigation was made, and fortunately for the stockholders the results of the revaluation prove that they have secured a better bargain than they thought; as the following statement as at February 28th, 1909, shows:

CAPITAL ASSETS	
Land	\$ 50,000
Buildings, etc	100,000
Fixed Plant and Machinery	200,000
Loose Tools	30,000
	\$380,000
CURRENT ASSETS	
Inventories and Manufactured Products,	
Stores and Material, on hand	\$120,000
Accounts Receivable	100,000
Cash	27,500
Less:	\$247,500
CURRENT LIABILITIES	
For Accounts Payable	\$20,000
For Interest to Vendors	2,500
	22,500
	225,000
Total Net Assets	\$605,000

At January 1, 1909, the net total valuation might have been expected to amount to \$552,500, being the valuation of July 1st, 1908, with the addition of \$27,500 undivided profits. At February 28th it actually exceeds this figure by \$52,500. This excess is found, by

comparison with previous statements, to be made up as regards \$50,000 of increase in capital assets over and above the actual expenditures made, and as regards \$2,500 of the profit for the two months of January and February, 1909.

This profit is, however, so much less than that in previous periods as to call for further investigation, and the fact is then disclosed that liabilities for expenses, etc., to the amount of \$3,000, chargeable against the period previous to January 1st, 1909, had not been provided for at that date, but have been charged against the subsequent period, and also that, while the manufactured products on hand at February 28th had been properly valued at cost, those on hand at January 1st had been taken at the market value, which was \$10,000 in excess of cost. Correcting these errors, the trading profits for the two months are ascertained to be \$15,500.

The Directors of the new corporation, however, claim that they are also entitled to treat as profit the increase in the value placed on the capital assets, on the ground that if they were willing to purchase on the basis of the July, 1908, Statement for \$900,000 they have made a profit by acquiring assets to the value of \$50,000 more than they expected. But it must be remembered that an expression of values in figures is at best an estimate, more or less accurate, while the price paid is an actual tangible fact; and the principle previously stated applies here also, that whatever property is acquired under the contract must be held to be the exact equivalent of the price paid. If it eventually appears that there is more or less value than was supposed, so much the better or worse for the purchaser, but the fact remains that he paid a certain price for a certain property. If the tangible assets acquired turn out to be of greater or less value, the cost of the intangible asset of goodwill must be less or greater by an equal amount. Hence, in the present case, the overvaluation of \$10,000 in the Inventory, and the understatement of liabilities by \$3,000 on the one hand, and the undervaluation of \$50,000 in capital assets on the other, represent a net reduction of \$37,000 in the amount paid for goodwill, which is thus found to amount to \$310,500. Finally, as a result of these various adjustments the financial position at January 1st, 1909, is ascertained to be as follows, and upon this basis the books of the new corporation should be opened:

CAPITAL ASSETS

Land	\$ 50,000	
Buildings	100,000	
Fixed Plants and Machinery	200,000	
Loose Tools	30,000	
		<u>\$380,000</u>

CURRENT ASSETS

Inventories of Manufactured Products, Stores and Material, on hand	\$112,000	
Accounts Receivable	95,000	
Cash	28,000	
Less:	\$235,000	

CURRENT LIABILITIES

For Accounts Payable	\$23,500	
For Interest to Vendors	2,500	
		<u>26,000</u>
		209,000
Total Net Tangible Assets	\$589,500	
Leaving to represent Goodwill	310,000	
		<u>\$900,000</u>

The overvaluation of inventories found to exist above is a frequent occurrence on the sale or transfer of a business. In selling stocks of material and partly and wholly manufactured products on hand, the vendor is clearly entitled, in default of any provision to the contrary, to claim the full market price. On the other hand the purchaser, if he pays the full market price, runs the risk of making no profits, or even of making a loss, on the realization of these products. Hence, it is usual for the contract to contain a provision that the goods on hand shall be valued at cost. In the case under consideration the whole undertaking was of course purchased for a lump sum, but although in the Balance Sheet on which the contract was based market values were used, still in opening the books cost is the correct basis, and the adjustment made is the only fair way of dealing with the matter.

Accounts receivable should be, and usually are, guaranteed by the vendors to the full amount; but if not, a loss may be incurred on the realization thereof, and this again would mean that the corporation has acquired less in the way of book debts and paid more for goodwill than it originally anticipated. Similarly, where, as in the illustration, liabilities are found to have existed at the date of purchase in addition to those included in the Statement furnished

to the purchasers, the excess, if not recoverable from the vendors, will mean a further addition to the price paid for goodwill.

In our assumed case it will be noted that the corporation was easily able to adjust the accounts to a proper basis, as the books were well kept and the inventory valuations at previous dates were available. Unfortunately in practice this state of affairs is the exception rather than the rule, and it is consequently often a matter of great difficulty to arrive at any basis for a proper adjustment, even when it is obvious that the books do not disclose the real facts. It is in such cases that the experience of the Public Accountant stands him in good stead, and a knowledge of where to look, and of the elements involved, enables him to arrive at a substantially correct solution.

INVENTORY VALUATIONS

54. An error in an inventory valuation has been incidentally noted in the assumed purchase dealt with above and it will be useful now to consider in more detail the important accounting principles involved in the accurate determination of such valuations.

Profits can only be made out of the sale or exchange of one commodity for another of a definite and realizable cash value. The mere increase in the market value of an article, which it is not intended to sell at that time, cannot be considered as a profit; for the reason that the article may never be sold at that price, and the paper profit may never be realized. The object of the Profit and Loss Account of a manufacturing or trading concern is to ascertain as closely as possible the profits which have been realized on sales actually made; and for this reason raw materials on hand, and products partly or wholly manufactured, but not sold, should be entirely eliminated. In practice this result is obtained by valuing them at cost, no more and no less, and so exactly offsetting the charges to profit and loss for materials, labor and expenses, in so far as the result of their combination in manufacturing processes is still uncompleted and unsold.

On the other hand, a Balance Sheet is required to show the true financial position as a going concern. The inventory at actual cost may represent more or less than the market value, and, therefore, overstate or understate the assets; but to change the valuation would be to take up a profit or provide for a loss which might never

be realized owing to subsequent changes in the market value. Sound commercial principles require that no credit be taken for profits until they are realized; and further, that if there is any possibility that what remains unsold may not realize its cost, a proportion of the realized profits on sales which have been made should be carried forward to cover these possible losses. It is accordingly generally recognized as a correct accounting principle, that if the cost value of the inventory exceeds the market value, a reserve should be created to bring it down to that value, while, on the other hand, if the market valuation exceeds the cost, no credit should be taken for the profits until they are realized by an actual sale. This rule is of considerable importance where the inventories at the end of successive years show a progressive increase. If they be valued above cost, profits are shown in each year, which are an anticipation of those of succeeding years; and a large fictitious asset is created, which, on a subsequent fall in market values, may prove entirely valueless. In a quite recent case the Directors of a corporation have been held personally liable for a sum of \$1,000,000 in respect of dividends distributed to stockholders out of fictitious profits created in just this way.

The importance of a valuation at cost emphasizes the necessity of such a system of accounting as will enable cost to be accurately ascertained. The theory of cost accounting is merely an elaboration of ordinary bookkeeping, and its difficulty lies almost entirely in a correct ascertainment of the elements that enter into it. There is no theoretical difficulty in keeping a record of the number of hours, human and machine, and the quantity of material that enter into any process of manufacture; but practical difficulties arise from the large number of operations, the chances of error in the tabulation of hours worked and quantities consumed, loss of weight in process and many other minor points, coupled with the necessity of an economical operation of the cost accounting system.

When the actual quantities of material and number of hours worked in the direct process of manufacture are known, there are innumerable other expenses which cannot be allocated to any particular operation and yet are essential to all operations, such as Steam Power, Light, Heat, Taxes, Insurance, General Supervision and Cost Accounting; and the determination of the proportion in which

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these expenses should be distributed to the different processes is a problem which is incapable of an absolutely accurate solution. Almost every business differs in this respect, and various methods are adopted for arriving at an approximation to the result. The essentials are that the total amount absorbed in the cost over any period should not materially exceed, nor fall short of, the total of all such expenses incurred during that period; and that the method of distribution, once settled, should be consistently maintained regardless of the effect on the operations, unless and until a more accurate method can be substituted therefor.

A further difficulty lies in the fact that it is not always possible to draw a hard and fast dividing line between expenses directly chargeable to manufacture and expenses not so chargeable. There are expenses of Supervision, Bookkeeping and General Management, which cannot be specifically divided between the different departments of manufacture, sale, and collection, and the general management of the corporate organization. The expense of the first department only would enter into the cost of manufacture, while that of the second and third would be chargeable only against the gross profits resulting from the sales, and that of the fourth would be chargeable against the profits of the whole undertaking. A thorough understanding of the business, a careful analysis and apportionment of the studies of individuals, and a general knowledge of the manner in which each item of expense affects the different departments is necessary to arrive at even an approximate division, and at best the basis adopted is somewhat arbitrary.

The question continually arises whether interest in any form should be considered as part of the cost of manufacture. It is true that manufacture takes time and involves the lock-up of money for certain periods, and that this money should for those periods be earning interest. On the other hand, it must be remembered that interest is only one form of profit, that the object of any business is to earn profit, and that each operation, as well as each department, is only one in a series, none of which is complete in itself, and the whole of which are necessary to the complete process of manufacture and sale out of which alone can any profit be earned. To charge interest into costs is in effect to add to those costs a certain amount of profit before it has been made, and is, therefore, against sound

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commercial and accounting principles. It is sometimes claimed that as interest on loan capital, from the point of view of the owner or stockholder is an expense, it therefore should be treated as part of the cost of manufacture; but such a contention entirely loses sight of the fact that such capital is raised for the purpose of conducting the business, and is remunerated by a strictly defined share of the profits earned in that business. It is true that interest is usually payable, whether there are profits earned or not, but it must ultimately be met out of profits, and it is merely one of the incidental conditions of the loan that the lender is to be paid his share of profits at regular dates, and frequently in advance of any such profits being earned.

Here it may be well to point out a distinction which should be more widely recognized than it is between the profits of an undertaking and the profits of a particular section of those who contribute the capital required, as for instance the stockholders of a corporation. The profit of an undertaking is the difference between the sale price and the cost of its products after deducting therefrom the expense of disposing of the same. The manner in which the capital is raised affects not the profit, but merely the distribution thereof between the different interests by which the capital is contributed; and interest on borrowed capital is as much a part of the profit of the undertaking as is dividend on capital stock of a corporation, or the profits which accrue to an individual owner.

The accuracy of the periodical Statements of Earnings of manufacturing concerns depends to a large extent upon that of the inventory, both as to quantity and value. Without correct information as to the value of the stocks, it is impossible to ascertain the earnings; and yet the delay and expense involved prohibit the frequent taking of physical inventories, which in most cases would necessitate the closing of the works for a period sometimes of weeks, and a consequent loss of business. Up to comparatively recent times, it was the practice to take such inventories once a year, closing the works at a suitable date for that purpose; but the demand, on the part of directors and stockholders, for more frequent Statements of Earnings has necessitated some method of arriving at the approximate value of stocks on hand without the expense and delay involved in a physical enumeration thereof. The skill of Accountants has by

degrees evolved a system of book records, continuous throughout the year, of materials, work in process, and manufactured products, which enables a book inventory to be obtained each month so accurately that the closing down of large works for this purpose is now, unless in exceptional circumstances, almost unknown.

These book records consist of accounts, both of quantity and value, kept for each class of material and manufactured product, based on accurate returns of the quantities received and consumed, and of the time expended, and balancing with the principal books, so far as money values are concerned. The quantity and values of materials received are obtained from the original bills, analyzed, and charged to the respective store accounts. The consumption records are obtained from a very large number of small individual records of time and material expended in the various productive operations; these are collected, classified and summarized, and are charged and credited to the production and material accounts respectively on ordinary bookkeeping principles; with the result that the balance left on any material account represents the stock on hand, and the balance on any production account, after crediting the finished product, represents the cost of the uncompleted work.

It might be supposed that the consumption reports made up by working men, often illiterate, and with no idea of the purpose for which the records are required, would be so inaccurate as to be useless for practical purposes, but a little consideration will show that, apart from any deliberate attempt at falsification, errors would tend to offset each other, and the resulting difference should be comparatively small in proportion to the totals involved. In fact, as in so many other problems of every-day life, the principle of averages obtains, and if ordinary precautions are adopted the final results are as a rule found to be surprisingly accurate.

As any particular material in stock is reduced to a low point, a physical inventory thereof is easily taken, compared with the book records, and any discrepancies adjusted; and in this way almost the whole of the material accounts are verified physically at least once in the course of each year without any interruption of the ordinary business. In the case of large bulk stocks, such as ore, pig-iron, etc., the problem is a more difficult one, because it may be, and frequently is, a period of some years before the piles in which these

articles are kept are reduced to a sufficiently small quantity to enable any accurate inventory to be taken. In these cases, however, it is usual to allow a small extra percentage on the consumption to cover waste or loss, with the result that in practice the physical test more often shows an excess over the book record than otherwise.

Material in process of manufacture can usually only be physically verified when the process is entirely completed, which may be after weeks, months or, in large contracts, even years. But by a subdivision of accounts into different processes and small units, the book records are being continually verified at each end, that is, by the labor and material which is known to have gone in and by the finished product which is known to have come out, and provided that the values at which the material is charged in, and the finished product credited out, are approximately in accordance with the facts, the resulting balance of work still in progress must be substantially correct also.

In all these accounts the month is the unit of time most usually adopted, and the value at which a month's consumption of material should be charged out is of some importance. The safest rule is to assume that the stocks on hand at the beginning of the month are first exhausted, and to value the stock at the close at the average cost of the month, except where such stock is greater than the total receipts for the month, in which case the excess should be taken at the price at which the commencing stock was valued. Having thus obtained the value of the inventory at the close of the month, the consumption for the month should be credited to the material account, and charged to the proper cost accounts, at a figure which will leave a balance on the material account equal to such inventory value. But this rule requires to be followed with care, because it might happen, for exceptional reasons, that the cost for that month was either very much above or very much below the average, and in such a case the stocks should be adjusted to a more normal valuation.

The system here roughly outlined has not only obviated the loss and expense involved in taking a complete physical inventory once a year, but has also enabled book records to be maintained of sufficient accuracy to justify the declaration of dividends out of profits ascertained therefrom.

CONSTRUCTION EXPENDITURE

55. In the assumed case already dealt with it appeared incidentally that the purchased business had, between the date of the contract and the date of transfer to the new corporation, converted a certain portion of its current into capital assets. Some general rules have been laid down as to different classes of expenditures, which might be legitimately considered as an addition to capital assets, and it is now proposed to consider the equally important point of the method of ascertaining the amount of such expenditures when the work is carried out by the corporation itself.

The problems involved in the determination of the proper charges to be made for construction work are:

Firstly, To correctly ascertain the actual labor and material expended thereon, which, if proper records be kept, is a comparatively easy matter, and

Secondly, To determine the amount, if any, which should be added to these direct costs for general and management expenses, and possibly for interest.

In a going concern a conservative course is generally adopted, and no charge is made beyond the labor and material cost, for expenditures of moderate amount on additions to the property; but, on the other hand, if a new and distinct plant were in course of construction, and producing no earnings from operation, the whole of the administration expenses and the interest paid on loans raised for this special purpose, would be charged to construction account, and rightly so, being necessary elements of completing the work. This at once suggests the argument that what is reasonable and proper in the latter case should also be reasonable and proper in the former, particularly if facilities are employed which would otherwise be used on profitable work for outside parties. It must, however, be remembered that profits can only be made out of the sale of products; and that it is, therefore, incorrect that a concern should take credit for profits on work which is not intended for sale, and will, in all probability, never be sold as long as the concern is continuing to carry on business.

It would follow then that no charges should be made to construction for expenses which would have been equally incurred if there had been no such construction, and would in that case have

been charged against profits; although if special loans have been raised to provide funds for construction purposes, and a special staff of employees maintained for this sole purpose, it would seem quite legitimate that the interest paid on such loans, and the salaries of the special staff, should be charged to Construction Account until the work under construction is in full operation. Any further method might result in the creation of paper or fictitious profits, which would not be realized as long as the property was operated, and might never be realized on an ultimate sale thereof. A good instance is the case of a railroad building large extensions, the material for which in considerable quantities is carried over its own road. The freight on this material forms part of the earnings of the road, and if the new construction bears a large proportion to the mileage in operation, the earnings will be swelled to abnormal proportions by the additional traffic so created, and the road will appear, for a short period, to be earning profits entirely out of proportion to those derived from its normal operations. The whole of this increase is really fictitious and does not add to the value of the stock in any way.

Managers of the operating departments of a factory frequently claim that they should be allowed to charge a profit on construction work carried out for their own mills, on the ground that if the work were done outside they would have to pay a profit, and at the same time would set free their own facilities to carry out additional work at a profit for outside customers; and they even go so far as to say that if they cannot charge a profit on construction work so carried out, they will in future have the work done on outside contracts. It must be admitted that this is a plausible argument, but a little further consideration will show that it is fallacious. There is here a confusion between a *Profit* and a *Saving*. The reason that a concern undertakes its own construction work in place of letting outside contracts therefor, is that it can by that means effect a saving in its expenditure, by taking advantage of its own capital and facilities to carry out the work instead of using the organization and the capital of others, upon which it would have to pay a profit. The saving so effected is of considerable advantage in that it reduces the amount of capital invested and future earnings will represent a larger return on the investment. Moreover, it is seldom true that the use of a corporation's own facilities for construction expenditure really

means the throwing away of profitable work for outsiders, which would otherwise have been undertaken. It is doubtful if any well managed concern ever refuses profitable orders, because of its own construction work; its organization can and will, almost automatically, expand sufficiently to provide for any increase in its operations which is likely to be thrown upon it. Moreover, if a sum be added to the cost of construction and credited to Profit and Loss, to represent the profit which would have been earned by the company if the work had been done for outsiders instead of for itself, this profit can only be made available for distribution by increasing the amount of capital contributed for new construction work; and it can hardly be considered good financial policy to increase indebtedness for the purpose of paying dividends. The only sound principle that can be adopted is to charge to construction all costs and expenses which are directly attributable to that construction, but nothing for indirect expenses, interest, or profit.

CONSOLIDATED BALANCE SHEETS AND EARNING ACCOUNTS

56. It frequently happens that a corporation in place of purchasing the properties outright as in the assumed case, purchases only the stocks of one or more existing corporations, leaving the properties themselves vested in these corporations.

This growing tendency to form large aggregations of capital on the basis of a control by one corporation of the whole or the majority of the stocks of a number of others has led to important developments in accountancy practice. It has generally been considered that the Balance Sheet of any corporation, prepared from books and records properly kept, would disclose its true financial position, but the development of this system of control has shown that such a Balance Sheet will no longer suffice for this purpose; and it is important now to realize the difference between an investment in a company representing only a small proportion of its capital stock, and an investment representing the whole or practically the whole, and carrying with it the absolute control of the operations. Thus corporation "A" may own the whole stock of corporation "B," both carrying on a similar business. Stockholders in "A" may know this fact, but have no means of ascertaining the real position of corpora-

tion "B." "A" having the control of "B" may turn over to "B" all its unremunerative work, with the result of showing large profits on its own accounts, while the accounts of "B" show correspondingly large losses. Corporation "A" in its Balance Sheet carries its investments as cost, probably merged under the general head of "Cost of Properties," with all its other capital assets. Corporation "B" may obtain loans from corporation "A," which largely exceed its current assets, and may be expended in construction work, or even lost in operations, while corporation "A" carries in its Balance Sheet these same loans as current assets recoverable on demand. It is only necessary to point out that many of the railroad receiverships twelve years ago arose out of a state of affairs very similar to that described, to show that this is not an imaginary condition.

Realizing the misleading character of the ordinary Balance Sheet in such cases, the Public Accountant has evolved the Consolidated Balance Sheet; the basis of which is the recognition of the common-sense fact that a network of companies connected with each other by control of stockholdings, is still in effect one undertaking, and that if the stockholders in the holding company are to have before them a clear statement of its position, legal technicalities must be brushed to one side, and the position of the holding company shown in its relation, not to these sub-companies, but to the general public. To give a pictorial illustration of this position, imagine a large cube containing a number of smaller ones; no change in size or position of the smaller cubes which arises inside the larger one, can in any way affect the latter, in which no change can take place except by the entry of something from outside, or the abstraction of something from inside. Thus the whole position can only be changed by outside influences and not by any relative changes of its component parts. The Consolidated Balance Sheet represents the true position of the whole group of cubes to the outside world, and is thus not the Balance Sheet of a corporation, but of a condition after eliminating all the relations of the cubes one to another. Debts due by one company of the group to another; stocks of one company owned by another; earnings of one company at the expense of another, are all eliminated. The amount by which the value of the stocks of any company on the books of another exceeds or falls short of the par value thereof, represents an addition to or diminution of

the asset of goodwill in the final Balance Sheet; and as a result the capital assets in the Consolidated Balance Sheet consist of the total physical assets of all the companies (that is, land, buildings, plant, machinery, etc.), and in addition an item of goodwill represented by

(a) the goodwill asset in the Balance Sheets of the subsidiary companies, and

(b) the amount by which the aggregate book value to the holding company of the stocks of the subsidiary companies exceeds the par value of that stock.

Similarly, the capital liabilities represent the stocks and bonds of all the companies in the hands of the public, those owned between companies being eliminated.

The Consolidated Earnings Account should be made up on the same principles. Profits resulting to one company out of sales to another should be eliminated. Only sales and purchases to and from the outside public should be included, so that no profits are considered such except those made on deliveries outside the organization.

In other words, the whole organization is considered as merely a series of separate works under the same ownership, and the same accounting principles which would apply to a corporation owning one small factory, are applied to the large corporation owning the whole stocks of a number of subsidiary companies, which in turn own the stocks of other subsidiary companies, all the companies in the group themselves owning and operating their own factories. It will readily be supposed that in practice the preparation of a Statement of Earnings exactly on the basis here laid down is a difficult matter, and probably in all its elements has never yet been attempted; but inasmuch as a neglect of these principles, so far as the Profit and Loss Account is concerned, only means the swelling of the totals both of gross earnings and cost of operation, it is not of so much importance, provided that the valuation of the stocks of goods on hand is made on the basis of actual labor, material and expense involved therein, without any proportion of the profit of the different companies in the organization through which these products may have come.

A Balance Sheet of a corporation, whose only or principal assets are stated to be investments in other companies, should be looked upon with suspicion, unless the names of the other companies

are given, and clear statements are also given of their financial position; and even then a collection of Balance Sheets cannot show the true financial position of the whole group until they are all combined into one and the inter-company interests eliminated.

EXAMINATION PAPER

ACCOUNTING FOR MODERN CORPORATIONS

Read Carefully: Place your name and full address at the head of the paper. Any cheap, light paper like the sample previously sent you may be used. Do not crowd your work, but arrange it neatly and legibly. *Do not copy the answers from the Instruction Paper; use your own words, so that we may be sure that you understand the subject.*

1. What is meant by a *pool*? Name some of the weak points of pools.
2. What is the nature of a *trust*? In what way does it differ from a pool?
3. What is the nature and object of a *holding company*?
4. Name some of the principal advantages of a combination of manufacturing enterprises.
5. What are the most apparent evils of monopoly?
6. How should advances to a subsidiary company be treated on the books of a *holding company*?
7. What is a consolidated balance sheet intended to show? How should the accounts be grouped in this balance sheet?
8. What is represented by *property account* in the consolidated balance sheet?
9. When a *subsidiary company* is taken over by a *holding company*, how is the surplus of the *subsidiary company* treated on the books of the *holding company*? on the books of the *subsidiary company*?
10. At the close of a fiscal period, the inventories of a subsidiary company contain merchandise, transferred from another subsidiary company at a price above the cost to manufacture. How should such inventories be considered in making the balance sheet of the holding company? If included at the prices shown on the books of the subsidiary company, how should the apparent profit be treated?
11. Under what conditions can a corporation, whose assets do not equal its capitalization, be said to be not overcapitalized?

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12. If an improvement is made in a plant which reduces the cost of manufacture or improves the product, displacing an older appliance or process, should the cost be considered as a *capital* or *operating expenditure*?

13. A corporation makes an advance payment of insurance premiums. In making up a balance sheet, how should this advance payment, or that part of it represented by the unearned premium, be treated?

14. What is the logical method of treating discounts on bonds?

15. What is the nature of a sinking fund provided for the redemption of bonds? If the property against which the bonds are issued does not decrease in value, what becomes of the sinking fund when the bonds are retired? if the property has depreciated in value?

16. Define *depreciation*. On what basis should the charge for depreciation of a machine be calculated?

17. What does a consolidated profit and loss statement show? Why is it preferred by accountants?

18. In making an investigation preliminary to a consolidation or combination, upon what specifications should the statements of each company be based?

19. What special precautions should be taken to ascertain the correctness of the amounts claimed to represent the following assets: *Realty; Merchandise; Patents; Bills Receivable under discount*?

20. How should the following liabilities be verified: *Mortgage indebtedness; other indirect liabilities*?

21. What special investigation is necessary in respect to sales?

22. Draw up a form of certificate to be made by the accountant conducting such an investigation.

23. What is the provision of the English law in respect to the payment of dividends?

24. Name the usual forms of fixed assets of a corporation.

25. Under what conditions should provision be made for depreciation of real estate?

26. Is goodwill a *fixed* or *floating asset*? Upon what does the value of goodwill depend?

27. What are the usual forms of current or floating assets?

28. Upon what basis should the value of stocks in hand be figured? Why?

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29. Is it considered permissible to take account in a balance sheet of anticipated profits on contracts? Why?

30. In estimating the value of the asset *accounts* and *bills receivable*, what considerations are involved?

31. Prepare a simple form of profit and loss statement.

32. Suppose the workmen, ordinarily employed in the manufacturing operation of a corporation, are engaged in constructing an addition to the plant from materials carried in stock; upon what basis is it proper to make the charge to construction?

33. Under what conditions is it proper to add to the cost of material and labor, an amount to cover expense, on construction work performed for itself by a corporation?

After completing the work, add and sign the following statement:

I hereby certify that the above work is entirely my own.

(Signed)

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